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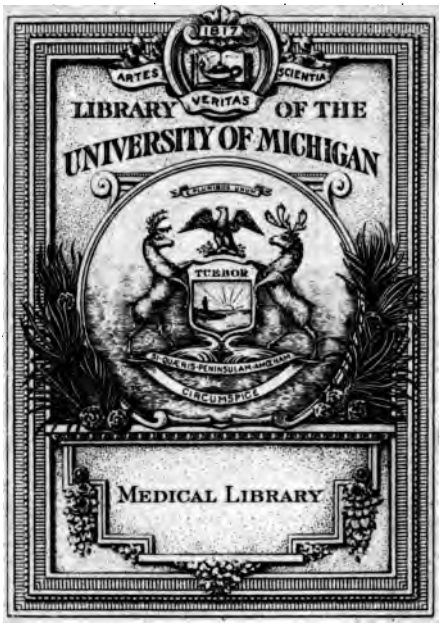
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# CANADA

# MEDICAL JOURNAL

AND

## Monthly Record

OF

## MEDICAL AND SURGICAL SCIENCE.


EDITED BY

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# CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Ligature of the External Iliac for Aneurism of the Common Femoral.* By G. W. CAMPBELL, M.D., Professor of Surgery, &c., &c., McGill College. Reported by DR. DRAKE, House Surgeon Montreal General Hospital.

Louis Foisy, aged 25, a storeman, was admitted into the Montreal General Hospital, 28 March, 1864, under Dr. G. W. Campbell, complaining of a tumor in the left inguinal region. He is of thin spare habit, sallow complexion, and extremely anxious and irritable. Has always enjoyed good health, with exception of a venereal ulcer which he contracted six or seven years ago, and which was attended with enlargement of the glands of the left groin. He had no internal treatment of any kind, and never had any secondary affection. Six or seven months ago he first noticed a very hard swelling in the left groin—not painful unless after walking a good deal. The tumor felt about as long and as broad as his little finger, the long axis being directed obliquely across the thigh. It was painful on pressure, but he was not conscious of any pulsation. It increased in size very slowly till about three weeks ago when a very sudden change took place in the symptoms. He had been skating one evening for three or four hours, went to bed well, and on awaking next morning found the tumor so painful as to compel him to keep his bed with the thigh constantly flexed on the abdomen.

The pain was of a burning, darting character. From this date it grew rapidly to its present dimensions.

On examination a hard, well-defined, pulsating tumor of an oval form can be seen and felt in the left groin. The tumor measures four inches by two and a half, the long diameter directed obliquely upwards and outwards, and the shorter extending from about three fourths of an.

inch above Poupart's ligament downwards and forwards on the thigh. Arterial thrill and pulsation are felt very distinctly over its whole surface, and nearly as far outward as the anterior superior spinous process. On placing the stethoscope over any part of the tumor a loud blowing murmur is heard, and may be traced for some distance in the course of the vessel both above and below. The heart's sounds are normal. All pulsation ceases and the tumor becomes perfectly flaccid on making firm pressure in the course of the external iliac. The pulse on the distal side of the vessel is weakened, and in the popliteal cannot be felt, though it is distinct enough on the healthy side. His general health is as good as usual; and as treatment by continuous pressure is practically impossible, and danger of the sac bursting appears imminent, deligation of the external iliac was resolved upon.

Wednesday, March 30th. The bowels having been previously well evacuated with a dose of castor oil, and the pubes shaved, the man was placed on the operating table on his back, the shoulders raised and legs extended, and put thoroughly under the influence of chloroform. A curved incision, five inches in length, was then carried through the integument from a point an inch to the inner side and a little above the anterior superior spine of the ilium to about the inner third of Poupart's ligament. The superficial fascia and abdominal muscles were cautiously divided, to the same extent, and the transversalis fascia being exposed. a small portion was pinched up by forceps, and an opening made at the upper angle of the wound: a director was then gently insinuated, and the fascia divided the whole length of the wound. The peritoneum was exposed without having sustained the slightest injury, and was gently detached by the fingers to a sufficient extent, and held to the inner side by means of a broad copper spatula. The sac of the aneurism could now be felt pulsating with so much violence that some fears were entertained it might give way. It was also found that the sac extended somewhat higher than had been anticipated from the external examination. The fascia covering the vessels was next scratched through with a scalpel, having its edge and point previously blunted, and the sheath of the vessel being exposed and opened by raising a fold with forceps, and scratching it through with the blunt pointed scalpel, an aneurism needle was passed without any difficulty between the vein and artery from within outwards. A very small opening was made in the sheath, and only enough detached to allow of the needle being passed. Having satisfied himself that the ligature controlled the vessel completely and included nothing else, the operator then tied it firmly. All trace of pulsation in the tumor ceased immediately. The wound was closed with silver sutures and adhesive

straps, and a compress of lint applied with a spica bandage. The patient was removed to bed; the left leg, encased in flannel, was maintained in a semi-flexed posture, and warm water bottles applied to the foot. Not an ounce of blood was lost.

9 p. m.—He appears pretty comfortable though rather excited and anxious. Pulse 94. Temperature in left leg 94° 5, and on the right 99° 5—no pulse in tumor. Ordered to take 20 drops chlorodyne, and to have Tr. Aconit gtt. j. every second hour. Ordered milk diet.

12½ a. m.—Feels easier; has vomited once. Pulse 96. Has not voided urine since the operation.

Thursday, 2nd day, 10 a. m.—Pulse 120. Temperature in left leg 95°.5, in right 100°. Looks much more cheerful. Vomited five times during the night. No pains or tenderness of the abdomen Has made water twice. Tongue moist, slightly furred. Thirst moderate. Ordered small pieces of ice to be kept in mouth.

Friday, 10 a. m., 3rd day—Pulse 120, soft and compressible. Temperature right leg 99°, left leg 98°. Did not rest well. Complains of pain in left side just above middle of crest ilii. No tenderness elsewhere. Ordered chicken broth.

The wound appears healthy, and is to be dressed daily.

Saturday, 10 a. m., 4th day—Feels much better and is quite cheerful. Pulse 94. Temperature left leg 96, right leg 98. Tongue moist and slightly furred. Free discharge of healthy pus from upper angle of wound.

From this date he continued to progress favorably: two of the sutures came away and the wound appeared to be doing well till

Wednesday, 8th day, 5 p. m.—Has had a rigor, and now complains of sharp pain in left side "like a stitch." With the stethoscope a gentle to and fro friction sound can be heard over the heart's apex, synchronous with the heart's action, and continuing while the breath is held. Pulse 120. A few leeches were applied with relief to the pain, but the symptoms now detailed were followed by irregularity in the pulse, extensive dulness over the cardiac region, and other unmistakable indications of pyæmic pericarditis. The left lung subsequently became involved. Dulness and moist crepitation gave evidence of secondary deposit in its texture, and although the patient frequently rallied, and signs of improvement in the amount and extent of the effusion were indicated by percussion and the stethoscope, still the strength gradually gave way, and he died on the 32nd day after the operation. The treatment was supporting throughout, with wine, and as much nourishing food as the stomach would bear. Opium, chlorate of potass, iron and quinine, and

finally nitrate of ammonia, were administered. The ligature had not come away, but the wound was completely closed. The body was removed by the friends immediately after the patient's death against the regulations of the hospital, and the post mortem examination was conducted at his own residence, under circumstances of considerable difficulty: the relatives, being opposed to it, were very violent and noisy. All that could be done was to secure the aneurismal sac, and surrounding parts, which were removed for a careful dissection, and no attempt was made to investigate the condition of the thoracic viscera. However, in dividing the common iliac artery and vein near the aorta, pus was discovered to flow from the vein, and a quantity of sero-pus escaped from the peritoneal cavity.

The aneurismal sac was in form and size like a large hen's egg, it was situated chiefly upon the outer side of the artery, and extended from an inch above Poupart's ligament to the giving off of the profunda. The anterior crural nerve was spread out upon its surface, and its interior was completely occupied by a dense coagulum.

The artery above the point of ligature was filled up by a clot as high as the division of the common iliac, and appeared healthy; the ligature had separated and lay loose in the wound. It may be mentioned, in conclusion, that erysipelas and puerperal fevers were epidemic in Montreal last spring, and that there were other cases of pyæmia in the hospital.

---

*Traumatic Aneurism of the Femoral Artery—Ligature.* By WILLIAM H. HINGSTON, M.D., L.R.C.S.E., Physician to the Hospital de St. Famille. Reported by Mr. E. C. WALSH.

R——F——, æt. 26, a native of Canada, and of temperate habits, while passing along one of our streets on the 21st of April, having in his hand a file, the blunt end came in contact with a box, which was lying on the sidewalk. The force was considerable, and the sharp end of the instrument entered the outer side of the thigh, about three inches and a half below Poupart's ligament, its direction being oblique, and beneath the sartorius muscle. It was immediately removed by himself, and the amount of hemorrhage which ensued was considerable. He applied his handkerchief tightly above the wound, and thus controlled the bleeding. Dr. Rottot soon after was in attendance, and dressed the wound. Dr. Hingston was subsequently called in, but did not remove the dressing. The patient suffered a good deal of pain during the night, but was tolerably free from it in the morning. He continued easier until the 25th,

when, on examination, Dr. Hingston discovered a small pulsating tumor, three inches to the inner side of the wound, which he pronounced to be an aneurism. Weights were placed upon the tumor, notwithstanding which it continued gradually to enlarge. On the 29th April a consultation was held, when it was decided to try digital compression. This was kept up for fifty-four hours, the patient being watched by several students belonging to McGill University, and the Montreal School of Medicine, at the end of which time, there being no perceptible diminution in the size of the aneurism, its walls being very thin and it being easily emptied of its contents, it was determined to ligature the injured vessel where it had been wounded. On the 3rd of May, twelve days after the accident, the operation was performed by Dr. Hingston, assisted by Drs. Campbell, Howard, and Fenwick, (the students who assisted at the compression, being also present). The external illiac artery was controlled by means of one of Carte's large compressors. Pressure by means of the hand was made upon the common femoral high up, and the same means to prevent hemorrhage was adopted upon the distal side of the artery. An incision was then made through the skin and fascia, on a line with the artery, and about four inches to the inner side of the original wound, of sufficient size to allow the introduction of the index finger. Through this opening the artery was searched for; and though the amount of bleeding was insignificant, the wound in the artery could not be discovered. The aneurismal tumor had pushed the sartorius muscle inwards, and it was therefore of no use as a guide in subsequent operations. Having thus failed, a somewhat lengthened incision was made, cutting into the sac, and the vessel sought for, but the semi-organised condition of some portions of the sac and the altered state of the surrounding parts from extravasated blood, made the discovery somewhat difficult. It was soon found however, and the wound ascertained to be upon its posterior aspect. Ligatures were passed around the artery, both above and below the seat of injury, and firmly tied. Very little blood was lost during the operation. The wound was brought together by means of several interrupted sutures, and adhesive plaster—the limb placed in a slightly elevated position, and lightly covered. The patient bore the operation well. About twenty minutes after his removal to bed, he became suddenly weak. Mr. Walsh was in attendance at the time, and administered wine, at short intervals, till he had taken about half a pint, when he rallied. The temperature of the injured limb remained as high as that of the sound one. This was doubtless owing in a measure to the more perfectly established collateral circulation caused by the attempts at cure, which had been made by compression.

May 4th. Feels better. Wound looks healthy. Temperature of limb unaffected. Has taken some beef-tea. To have half a drachm of chlorodyne, every four hours, during the night, if restless.

May 5th. He was feverish during the night, and did not sleep. Was very thirsty. His stomach would not retain the chlorodyne. Feels better this morning, and continued so during the day. ℞ Pulv. Doveri gr. x. H.S

May 6th. Not so feverish. Appetite good, and the various secretions normal. He took, during to-day, some broiled chicken, and a little broth at intervals.

May 8th. Had a distinct rigor this morning, which lasted half an hour, and was followed by profuse perspiration. A dry cough annoys him a good deal, especially towards night. To have the following: ℞ Quinine Disulph. ʒ ss. Acid Sulph. Arom. m.xx. Syr. Auranti ʒ j. Aquæ ad. ʒ viii. A tablespoonful to be given every four hours.

May 9th. Cough worse. Has had two more rigors, one of which was about two hours in duration, and was very severe. Towards evening, during a fit of coughing, hemorrhage from the wound to the extent of about six ounces occurred, but was controlled by moderate pressure. A solution of alum was ordered to be applied.

May 10th. Some slight hemorrhage to-day, which seems to be of a venous character. Pulse 110. Tongue coated white. Countenance pale and anxious.

May 11th. Very weak, dull and incoherent. There is some delirium, and no desire whatever for food. Wound full of unhealthy pus, and signs of gangrene are visible.

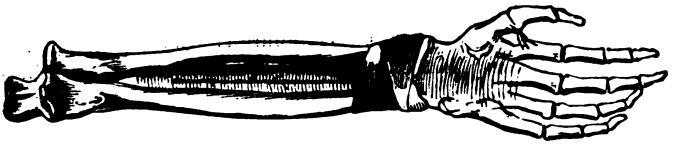
May 12th. Still weaker—pulse towards evening 160. Coagula in wound exceedingly offensive. Complains of a good deal of constriction about the chest.

May 13th. Has been in a stupor most of the night. Is a little brighter this forenoon, but very weak. Pulse 175—small and wiry. Cough and dyspnœa very troublesome. *Expectorated a quantity of sanious pus.* Complains of pain in the hypogastric region. A catheter was introduced, and a quantity of healthy-looking urine drawn off. Towards the afternoon, he gradually got weaker, and his breathing became exceedingly difficult. About half past three he died.

No *post mortem* examination was allowed, as the body was at once removed to Western Canada for interment. There can be no doubt, however, that death resulted from pyæmia.

*Double Pronator Quadratus Muscle; two cases observed during the session* 1863-4. By GEORGE E. FENWICK, M.D., Demonstrator of Anatomy, McGill University.

In the course of the Session just closed, two cases of the above peculiarity were met with, in the anatomical rooms of the University. The first was in the left arm of a female subject, from which the accompanying engraving, taken from a photograph, was procured. On showing it to



a confrère, he remarked that had the person been a violin player, it might be accounted for, from the increased use of the arm, in handling his instrument. Very shortly afterwards a male subject was brought to the college, who for years had eked out an existence, in playing the violin in low taverns; and I certainly felt anxious to see the pronator, when, singular enough, it was found double, occurring again on the left side. In both instances, the muscle consisted of two distinct muscular bundles, triangular in shape, with their broad attachments or base reversed. The upper muscle arose by fleshy fibres from the inner edge of the ulna, the fasiculi converging to a point, presenting a somewhat radiated appearance, terminated tendinous, and was inserted into the anterior surface of the radius. The lower muscle had a broad muscular attachment to the anterior surface of radius, the fibres converging to a point, in fact a distinct tendon, which was inserted, into the anterior portion near its base, of the styloid process of the ulna. The two muscles combined presented a most singular appearance, and occupied the same space as does the quadratus usually. The arrangement would not in any way affect the action of the muscle, but in fracture of the lower end of either bone, I doubt much, whether it would not give more than ordinary trouble, in retaining the fragment in its proper place. I find no mention made of this anomaly by anatomical authors, except by Horner, in his work on Special Anatomy and Histology. In a foot note it is stated, in speaking of the pronator quadratus: "This muscle in some very rare cases does not exist. Sometimes it consists of two layers whose fibres cross each other. In a case noticed in the Pennsylvania Hospital, by Dr. J. R.

Barton, it consisted of two triangular pieces, the bases of which were reversed."

I may mention, that the present professor of anatomy in McGill University, Dr. Scott, who has been connected with the anatomical department of the college, for nearly twenty years, and who, during that time, has had ample opportunity for observation, never met with an instance of the above description.

Montreal, May, 1864.

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*Poisoning by Strychnia: recovery from a large dose.* By FRANCIS WAYLAND CAMPBELL, M.D., L.R.C.P., London; Member of the Royal Medical Society of Edinburgh; Corresponding Member of the Dublin Microscopic Society; Physician to the Montreal Dispensary, and Infirmary for Diseases of Women and Children.

The following case is interesting, not only from the quantity of the poison taken, but from the comparatively long time which elapsed before the patient was seen by me, and the consequent delay in the commencement of treatment:

F—— J——, a gentleman of position in society, owing to reverses in business, had been for some weeks in exceedingly low spirits, and during that time had drank very freely. On the morning of the 17th November last, he left his house about 8 o'clock in a very excited state, not having partaken of any food, and shortly after that hour called at a druggist's store and requested one of the clerks with whom he was acquainted, to give him sufficient strychnia to poison two dogs. About four grains and a half were weighed out to him. He states that he immediately went to a neighboring fashionable saloon, called for a glass of gin, and placing all the strychnia in it, drank it off. To make sure that none remained behind, he immediately filled the glass with water, and drank it also. He then started for home, and on the road one or two very slight spasms seized him. On reaching his house he at once undressed and went to bed, his wife being out at the time. She returned about ten o'clock, and found him in a very strong paroxysm. He at once confessed what he had done, and the family physician who was sent for not being at home, I was called upon to attend him. It was eleven o'clock when I reached his house, fully two hours and a half having elapsed since he took the poison. On my entering the room he was seized with a very violent tetanic paroxysm, which lasted fully a minute and a half. He had not vomited, but had drank freely of milk. I at once administered a drachm of sulphate of zinc, which soon produced copious vomiting.

When it had in a measure subsided I gave a drachm of tannin in a tumbler of water, which was repeated in about half an hour. A little after twelve, another very violent paroxysm came on, which was followed by violent emesis, which continued with a good deal of frequency the entire day. At two p.m. the paroxysms were recurring every twenty minutes, and were very severe. He was given two grains of solid opium, and shortly after drank several cups of green tea. At half-past two, Drs. McCallum and Drake saw the patient, when fifteen drops of the fluid extract of belladonna was injected subcutaneously, near the third dorsal vertebræ. Chloroform was also administered *during* the paroxysm. At three o'clock the spasms were recurring every eight minutes, and very strong, their *duration* being apparently lessened by the inhalation of chloroform. Pulse 140—full and strong. By half-past three the patient began to show evident signs of weakness; the interval between the spasms had decreased to about three minutes, and they were much stronger. Sherry and water was given at the rate of an ounce every hour. As the patient was evidently sinking, I determined to try the effect of keeping him partially under the influence of chloroform the whole time. Its effect was all that could possibly be desired. The interval between each paroxysm gradually lengthened, and at 7 p.m. it had increased to an hour, though their severity seemed to be but slightly diminished. At this time I had his spine well rubbed with soap liniment and tincture of opium, and gave him a drachm of compound spirits of sulphuric ether, in three drachms of camphor mixture, every two hours, still continuing the inhalation of chloroform, but not to the same extent as previously. At 9 p.m., while drinking some beef tea, a violent paroxysm came on. Its duration was short, and during the previous two hours he had only two very slight spasms. At eleven p.m., when I left him, no more severe ones had occurred, and only one very slight one. I ordered beef tea in large quantities, and the wine to be given every three hours. Pulse 120 and weak. At 8.30 a.m., next day, I visited him, and found he had passed a tolerably comfortable night. No spasms—only occasional involuntary twitchings. His spirits are better. To have the ether and camphor mixtures every four hours only. Wine to be stopped. To have beef tea at intervals, and chicken broth for dinner. 9 p.m., still improving, the twitchings continue, but neither so strong nor so frequent. From this time the patient made a rapid recovery, and, in a week from the time he swallowed the poison, was out attending to his business. The quantity of chloroform consumed between 1 p.m. and 11 p.m. was rather more than a pound, and its beneficial effects were certainly most marked. I am firmly convinced that had it not been so largely inhaled the case would have terminated fatally.

*Elephantiasis of the Scrotum, about the size of a man's head.* Successful removal. By Professor Ferguson, of London. Reported by Dr. Francis W. Campbell.

Elephantiasis of the scrotum is a disease of great rarity, not only in this country, but in Great Britain. In India, and other tropical countries, it is of comparative frequency, at times reaching an enormous size. Cases are on record where they have been removed weighing 80 lbs. and 120 lbs. The case detailed below occurred under the care of Mr. Ferguson of King's College Hospital, in June, 1861, while I was sojourning in London, and was witnessed by me, and was the first case of the kind which he had met with in his large private, and hospital practice. Mr. Ferguson stated that he only knew of two other cases, having been met with in Great Britain—one in the practice of the late Mr. Liston, which terminated fatally, the other in that of the late Mr. Skey. Mr. Ferguson said that death occurred in Mr. Liston's case, from the amount of blood lost while attempting to save the penis and testicles, which were eventually removed. In the present case, if it was possible, the testicles would be saved, but he would not waste time looking for them. If not found easily he would not hesitate for a moment to sacrifice them. He suggested the idea that uncleanliness has considerable to do with the growth of the disease in tropical countries. The following are the notes of the case:

A strong robust Englishman, aged 41, from Devonshire, was admitted into King's College Hospital, London, England, on the 11th of June, 1861. States that when young he had several attacks of gonorrhœa, almost every attack being accompanied by slight orchitis. About fourteen years ago, he had a severe attack of orchitis, but in time the testicles regained their ordinary size. Some eight years ago he received a blow on the scrotum, which gave rise to another attack of orchitis, this time leaving the scrotum considerably enlarged. From that time till now, he has had periodical attacks of scrotal inflammation, each succeeding one leaving it larger than it found it, till it has reached its present formidable size. Was never out of England. Was married for twelve years, but is now a widower, and has not had any children. For a number of years has been very temperate in his habits.

When admitted to hospital the scrotum presented the appearance of a tumor about the size of a man's head, suspended by a very narrow neck, and of a light rose color. At its largest circumference it measures twenty-six inches, seventeen inches from the under surface of the penis to the perineum along the raphé, and twelve inches around the

neck. Manipulation conveys the sensation, as if the tumor was lined with thick cartilage. Cold weather causes it to contract somewhat. The testicles can be discovered with great difficulty at the back and upper part of the scrotum, apparently not enlarged, but rather painful when touched. The penis was all but undiscoverable, being entirely hidden in the foreskin, which is enormously hypertrophied. Since his admission into hospital the tumor has been punctured twice with a trocar, but nothing came away but a few drops of blood and serous fluid.

On the 6th of July, 1861, Mr. Ferguson having determined to remove the scrotum, ice was applied for four hours previous to the operation. The operating theatre was crowded with students and medical men drawn thither by the rarity of the case. Chloroform being administered, Mr. Ferguson, who was aided by several qualified assistants, commenced the operation by making an incision through the hypertrophied foreskin, and performed as it were circumcision. He then severed the penis from its connection with the scrotum beneath, and gave it, denuded of its integument, to an assistant to hold out of the way. Next making a horizontal cut round the base of the scrotum, by a little dissection, he came upon the testicles, which were enclosed in small hydroceles, fluid gushing out as they were opened. These he separated from their connection, nearly up to the external abdominal ring, and finding them healthy, they were given to an assistant to hold out of the way. After this, two or three sweeps of the knife sufficed to remove the entire mass. The bleeding was considerable—yet not so great as might have been expected from the formidable nature of the operation—as competent assistants secured the vessels, as soon as out, by the firm application of sponges. A number of ligatures were applied, and the scrotum sewn up from the bottom, some little difficulty being experienced in replacing and retaining the testicles. The patient was removed to the ward under the influence of chloroform.

Late in the evening of the same day profuse hemorrhage set in. Cold was applied, but without any success in controlling it; and as the patient seemed on the verge of syncope—the bandages were undone, the wound re-opened, clots turned out, and four ligatures were applied to bleeding-vessels. Ice was again applied, and the bleeding ceased.

July 9. Is progressing favorably. The right testicle was found to-day to be protruding slightly in the middle line. It was pushed back, and two sutures put in, to keep it in its place. Has no difficulty in passing urine.

July 10th. Is very weak, and has very little appetite. Bowels moved this morning by a dose of oil—the first time since the operation.

Pulse 104. Wound commencing to discharge. Water dressing to be applied.

July 13th. Has improved greatly since last report; appetite good; wound beginning to granulate; discharge abundant and healthy, a large poultice to wound.

July 17th. Discontinue poultice, and re-apply water dressing. Most of the ligatures are away.

July 18th. Red wash ordered to-day.

Aug. 4th. Still progressing very favorably. The denuded penis is granulating healthily. The left testicle forms a prominence above and to the left of the penis, the right is situated below, about the centre, and is not readily felt.

Aug. 10th. A redundance of skin above the root of the penis, which was very unsightly, was removed by Mr. Ferguson to-day.

Aug. 24th. Was discharged to-day to return home, the wound being all but closed, and the patient strong and hearty.

The tumor weighed 6 lbs., and consisted of a simple hypertrophied condition of the tissues of the part infiltrated throughout with semi-gelatinous material.

## HOSPITAL REPORTS.

*Delirium Tremens treated with large doses of Tincture of Digitalis, under the care of* DR. FRASER.—Peter Dupuis, a young man of intemperate habits, was admitted into the Montreal General Hospital, on the 16th May, 1862, suffering from delirium tremens. This is the third attack within three months.—May 17. Is exceedingly nervous. Has not slept since admission. To have the following at bed time: ℞ Chloric Ether ʒj; Chlorodyne gtt. xl fiat. Haust. Ordered nourishing diet, and to have soda water, with ginger syrup, for a drink.

May 18th. Still no sleep. Nervousness increasing—also the delirium. Complains of some pain in chest, for which a sinapism was ordered. ℞ Cal. gr. iv. Ol. Tig. gtt. vi. Pulv. opii gr. j. SS. ℞ Chlordyne, gtt. xii H.S.

May 19th. Has not slept. Pain in chest still present. Sinapism to be repeated. Ordered 2 oz. of brandy.

May 20th. No sleep. Quite delirious—almost impossible to keep him in bed. There is very great tremor, and he is constantly picking at the bed clothes. To have ʒss. of the tincture of digitalis immediately. This was placed in the hands of one of the dressers, with

instructions to administer it, and remain beside the patient to watch its effect. Before the digitalis was given, the pulse was 100—of moderately full volume, and it did not vary more than a few beats after its administration. An hour after, he became more composed and somewhat drowsy; and two hours from the time it was taken, the patient was in a profound sleep, in which he remained, with the exception of brief intervals, till the following morning, when the delirium was quite gone. He rapidly improved, and was discharged from hospital on the 23rd of May.

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*Delirium Tremens treated by large doses of Digitalis, by* DR. FRANCIS W. CAMPBELL.—The following case occurred in my private practice. On the 25th of April, 1862, I was called upon to attend a strong and robust young man, who was laboring under an incipient attack of delirium tremens. He had for some weeks being drinking whiskey to very great excess, but for four days previous to my seeing him had not tasted liquor of any kind. Has not slept for two nights. Will not remain in his room, stating that people bother him while there. Sits in the dining-room reading—delirium not always present. States that he is aware that his ideas are at times absurd, but that he cannot resist them. Tongue thickly coated—great pain in the head. Bowels constipated. Pulse 89. Ordered to go to bed, and to have a pill containing half a grain of opium, and a drop of croton oil, immediately; another to be given in three hours, if the bowels did not move freely. Put him upon Graves' mixture, which was to be commenced after the bowels operated, and repeated every three hours. I saw him in the evening. His bowels had operated several times, yet he was rather more excited. Complains that Graves' mixture gives him an electric shock every time he takes it, and refuses to continue it, but on persuasion promises to do so.

April 26th. No sleep. It is impossible to keep him in bed. Still more excited—especially, his friends say, after taking the mixture (Graves'). Positively refuses to take any more. To have 3 ss. of the solution muriate of morphia every hour, till sleep is produced. 10 p. m. No sleep. Quite delirious, and very violent. His friends getting greatly alarmed, I met Dr. Reddy in consultation, when it was decided to give half an ounce of tincture of digitalis in a tumbler of porter, and to repeat the same in two hours, if the first did not quiet him, and to again commence Graves' mixture, giving a tablespoonful every two hours—the first dose to be given two hours after the last dose of digitalis. The first dose of digitalis produced no noticeable effect whatever. The pulse, which was very frequent, and small, was not diminished a single beat, but

within an hour after the second dose he became much quieter, and in an hour and a half was in a tranquil sleep, which lasted several hours.

April 27th. Was sleeping when I made my visit this morning: Perspiration most profuse. Pulse 82, quite soft and compressible. He awoke about 8 a. m., and took his first dose of Graves' mixture, and almost immediately went to sleep. 4 p. m. Is awake, but still slightly delirious—inclined for more sleep. 10 p. m. In a profound sleep.

April 28th. Is quite rational. Slept till 7 a. m. Feels very weak. Graves' mixture stopped—with the exception that he is to get a tablespoonful at bed time.

April 29th. Improving. Quinine and iron prescribed. He was soon able to be about attending to business.

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## REVIEWS AND NOTICES OF BOOKS.

*On Diseases of the Throat and Windpipe, as reflected by the Laryngoscope, a complete Manual upon their Diagnosis and Treatment, embellished by* 116 *Engravings.* By GEORGE DUNCAN GIBB, M.D., M.A., Assistant Physician, and Lecturer on Forensic Medicine, Westminster Hospital. Second Edition. London: John Churchill & Sons, 1864. Royal 12mo., pp. 480.

Scarcely four years have elapsed since the author gave to the world the results of his labour and experience in the above class of diseases. He has continued his researches with diligence and with increased facilities, as has had brought to his aid, the reflecting mirror of Professor Garcia, through which means truly astonishing revelations are made, our diagnosis greatly aided, and topical applications facilitated, to parts which the surgeon had hitherto failed to bring within the scope of his vision.

There need be no doubt now of the local application of "the caustic" to the interior of the larynx, many sceptics believing that it is impossible to do so. With the aid of the means now at hand, the sponge or brush can be seen to pass the rima, and in some instances, without even giving rise to spasm.

Diseases of the throat and windpipe as a class are of the very deepest interest and until of late years were comparatively neglected. Daily experience proves the frequency of their occurrence, and to what serious consequences they lead when they are neglected or improperly treated. With a view of calling more markedly the attention of the profession, to the vast importance of the subject, and to supply a desideratum in medical

literature, the author devoted himself to the task, and has reaped the reward of his industry in becoming in the great city of the world, the authority "*par excellence*" on diseases of the throat.

In the former edition, the subject was treated of in thirty-two chapters; in this, the second issue of the work, there are thirteen chapters; twelve devoted to the subject under consideration, the thirteenth, containing a History of the Laryngoscope and Rhynoscope, the mode of use of these instruments, together with concluding hints and remarks of a truly practical nature. It is, as the author observes, "In every sense a perfectly new work; for the introduction of the Laryngoscope has added so much to our knowledge of the throat and larynx, as to render it necessary that the greater part of the subject should be re-written."

The first chapter is devoted to the consideration of the follicular disease of the throat, or granular pharyngitis and its consequences, resulting in some cases, when treatment is neglected, and in unhealthy constitutions, in implication of the deeper structures, even to destruction of the cartilages, and ultimate release by death. The author takes up in an eminently practical manner, the consideration of treatment, both constitutional and topical, referring in the course of his remarks to the inhalation of medicated powders, which, according to Dr. Fournié of Paris, are conveyed with great ease and precision to any portion of the air passages. The author also refers to the pulveriser of fluids, an instrument recently introduced by Dr. Sales-Gerous.

"It consists of a glass vessel containing the liquid, to the neck of which a syringe is attached. By pressing the piston, the air in the interior is compressed, and on turning the stop-cock it drives the fluid with such force against a metal plate contained in a barrel-shaped tube, that it is instantly converted into a fine mist, which the patient can easily inhale. The large tube conveys away such portions as are at once condensed. The apparatus is figured in the 'Medical Times' of June 28th, 1862, and is extensively used in France, but especially at the thermal establishment at Pierrefonds. I have used it with great advantage; but for simplicity, and perhaps less cost, it is rivalled by the instrument made by Weiss and Son."

"The most important of all the substances used is the nitrate of silver, a solution of which may be employed in strength varying from two to four scruples of the salt to an ounce of distilled water. This can be directly applied to the interior of the larynx, by means of the curved sponge and whalebone, or, what is still better, a brush and bent whalebone, which I was the first to adopt. Indeed, I have wholly abandoned the sponge, from the irritation it produces, and the manner in which it

scrapes and injures the delicate membrane of the larynx. A large, full-bellied camel or squirrel's hair brush is to be employed instead, and which will readily pass, with the aid of the laryngeal mirror, between the lips of the glottis, or around the base of the epiglottis, or any other part of the throat, as circumstances may demand. I wholly agree with many writers, that a solution of less strength than that named should not be applied; but, if it is necessary, according to the recommendation of Dr. Green, even a stronger may be made for use, when the ulcerations are extensive upon the epiglottis, or about the opening of the larynx, ulcerations which it is desirable to arrest at once."

In referring to the more chronic form of diseases of the windpipe, the author says, in section 2:

"In its importance, chronic disease of the windpipe ranks next to the follicular inflammation of the throat considered in the preceding section, for we have now to deal with one of its consequences. It ensues as the result of many other throat-affections besides follicular disease, and would seem in very many instances to follow in their wake, as is shown in other parts of the present work. The frequency with which it is encountered, both in its mild and aggravated forms; the tendency it has to involve the lungs by sympathetic irritation, as well as by spreading along a continuous membrane; and the obstructed or interrupted free admission of a sufficiency of air for the purposes of breathing, the result of impaired action in the vocal cords from thickening or submucous deposit,—necessarily invests its consideration with an amount of importance which must at once suggest itself to the mind of the reader. In many instances, unfortunately, the mischief is allowed to proceed and spread to such an extent as to become utterly irremediable, whereas timely interference might have done much to save life."

In the third section the author refers to that condition of the disease under consideration, in which the cartilages of the windpipe become involved in the ulcerative destruction, and in some cases actually exfoliate.

"When the general symptoms of chronic disease of the windpipe, described in the previous section, continue to progress, and the ulceration of the mucous membrane and its subjacent areolar tissues spread and extend more deeply, the cartilaginous framework of the larynx becomes involved, and serious mischief generally ensues. The parts which are exposed to the ravages of ulceration are the thyroid, cricoid and arytenoid cartilages, the epiglottis, and the rings of the trachea. Besides these, the delicate muscles and ligaments, the latter including the vocal cords, participate in the morbid action, and add to the general complexity of the disease.

The ulcerative process gradually eats into the attachments of the cartilages, which produces at first a partial displacement, especially of the arytenoid, which seriously embarrasses the breathing, and produces fearful attacks of spasmodic dyspnœa; in the mean time their destruction goes on, ending in a state of necrosis or death, and finally they are thrown off and expelled, and the poor sufferer obtains some temporary relief. When a portion only of the cricoid or of the thyroid cartilage is discharged and thrown off, it then constitutes a distinct exfoliation."

We have been arrested in further contemplating these diseases, although of great importance from their frequency and occasional formiddable consequences, our limited space precluding more than a very hasty reference to this part of the work, as we are desirous of noticing other portions of equal excellence and equal practical importance.

In the fourth chapter the author takes up the subject of specific diseases of the throat; and first on his list appears that occasionally formidable malady "Diphtheria." Many regard the disease as a recent scourge to the human family; but here again is found the old proverb, "nothing new under the sun," because the disease has been observed and carefully described by all writers on medicine during the last 400 years.

"*Pathology.*—Diphtheria is essentially a blood-disease, and manifests its great peculiarity in all its forms by the exudation of a distinct membrane over some part of the throat-apparatus, namely, on the tonsils, soft palate, uvula, and pharynx; the lining of the mouth, cheeks, and the nose; the larynx, trachea, and bronchi; and even the eyes and other external exposures of the mucous membrane may be affected, as well as the skin.

"In its chemical character the membrane is a coagulated albumen, and is analogous to that occurring in croup or other diseases of the air-passages. Under the *microscope* it is found to consist mainly of masses of epithelial scales or cells of all forms, mixed with granules and molecular particles; it can be split into a number of layers, which thus rather shows its distinct epithelial character.

"A pathological symptom of some importance, first noticed by Dr. Wade, of Birmingham,* is the presence of albuminuria, which is a forerunner of grave mischief in the majority of instances. It is noticed both in the mild and severe forms, and when observed in the former, when no risk is apprehended, the patient is perhaps suddenly seized with croupy breathing, and in a few hours life is sacrified. The necessity of examin-

* "Observations on Diphtheria."

ing the urine frequently, or morning and evening, is a matter that should not be overlooked in the apparently mild cases."

The author adopts the division of Mr. Hart, into "Simple Diphtheria," "Croupal Diphtheria," and the malignant form of the disease, characterised by the intolerable fetor, gangrenous condition of the tonsils and adjacent parts. A very clear and interesting description of the occasional Sequelæ of Diphtheria is given in this chapter, together with illustrative cases, which have come under the observation of the author. We can not conclude these remarks, without most heartily recommending this eminently practical work to all our readers. It contains throughout engravings on wood, taken, we presume, from nature, but not as we think of artistic merit: it may be that our ignorance of the appearances of the larynx reflected in the mirror of Garcia, affects our judgment. This does not in any way detract from the merit of the work itself. In the hands of the practical man it becomes a necessity: without it his library is incomplete.

The typographical execution is in Churchill's best style.

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## PERISCOPIC DEPARTMENT.

### SURGERY.

*Aneurism of the Ascending Aorta, communicating with the Superior Cava.*

John M—— was admitted into Guy's Hospital on the 5th February, 1864. He had formerly been a private in the army, and went through the entire Crimean campaign; while there suffered from cough and dyspnœa, with which he has ever since been affected, especially in winter. About Christmas, 1863, his face began to swell, and became of a purplish hue. His neck grew puffy, then the right arm, and after the left slightly. On admission, the patient, presented the following appearance: when stripped, the head, neck, thorax and arms seem to belong to a full bloated man, while the abdomen and lower extremities seem to belong to another man, being of normal color and dimensions. The lips and cheeks have a purple tinge, and very puffy, the color disappearing upon pressure; the veins of the skin of the thorax are gorged, and give the skin a mottled appearance, which extends from the clavicles as low as a line drawn round the body on a level with the apex of the ensiform cartilage. Below this, there is no mottled appearance, but the large veins are full, and on putting a piece of tape round the centre of the abdomen,

the superficial abdominal veins fill from above. A vibratile thrill, synchronous with the second sound of the heart, is perceptible to the eye over the right side of the chest. Percussion normal, except that cardiac dulness is a little low in the recumbent posture. At the apex, first sound of the heart difficult to make out. Second sound clear. No murmur with cardiac sounds. All over the ascending and middle portion of the arch of the aorta a soft whizzing sound is heard. At the commencement of the arch it is diastolic. Upon moving the stethoscope upwards, the murmur is heard to be both systolic and diastolic, but more diastolic. Over the third right costal cartilage, the sound is heard with greatest intensity. The character of the whizz is venous—a continuous churning sound. No sound in the right side of neck. There is bronchial breathing at the base of the anterior part of the right lung, but otherwise pulmonary sounds are normal. Is troubled with a short sharp cough, which produces much congestion of face and neck, at each attack. The radial pulse is small, but regular in rhythm—the right being less than the left. Beats 108 per minute, respirations 33. He continued much in this condition till the 21st February, when the weather became very cold, and the dyspnœa and cough increased. In the evening of the 21st there appeared under the right axilla a mottled redness of skin, which is hot. Was ordered ℞ Julep ammoniæ ℥j. œth. chlor. m. xx. lig. opii sed, (Battlei) m. iii., quartis horis, sumend; Brandy, 3 oz, 9 p.m. Pulse 140, respirations 52. Great tenderness in right axillæ. 22d. Pain in axillæ worse—inflammation spreading slowly in all directions. 29th—Inflammation has spread down the right arm and to the trunk; next the left axillæ and shoulder took on the same action, also the skin of the left side of the abdomen. He died at 8 p.m.: a post mortem was made eighteen hours after death. On opening the pericardium, a few flakes of lymph were seen floating in an opaque fluid, showing recent pericarditis. The aorta bulged forward on its right side, and here the lung was adherent. On removing this protrusion, it was found to be an aneurism of the size of a man's closed fist, It occupied the right side and posterior wall of the ascending aorta: commencing about an inch above the valves, it reached the inominata artery. This description applies to the opening into the sac; the latter projected both higher and lower than this, being seen, indeed, in the pericardium. The sac contained a recent clot, but no ante-mortem fibrine. The walls were remarkably thin, and at one spot ready to give way into the pericardium. Passing along the front of the aneurism was the superior vena cava, with the brachia cephalic at the upper part. On opening the vena cava a perforation was seen at its back part, just as it entered the auricle. This entered the aneurismal sac, so there was a free communi-

cation between the aorta and vein. The opening was about the size of an ordinary lead pencil; its edges were smooth, and everted toward the vein. The opening was evidently not very recent. The aorta elsewhere was covered with atheroma. Heart of natural size.—*Condensed from the Medical Times and Gazette, April* 9, 1864.

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## PARTICULARS OF THE TREATMENT OF A CASE OF TETANUS, IN WHICH THE CALABAR BEAN WAS FREELY ADMINISTERED.

By Holmes Coote, F.R.C.S., Surgeon to St. Bartholomew's Hospital.

I take no credit whatever to myself for the treatment of the following case. The patient was seen shortly after the manifestation of the first indications of trismus; the symptoms did not advance rapidly; the man was always hopeful, and endued with great moral courage; he received during his stay in the hospital the greatest possible attention. But I publish the case that it may serve to illustrate the action of certain medicines in the treatment of this unmanageable affection—viz., croton oil, calomel, the Calabar bean, morphine by hypodermic injection, and quinine; and these, too, in no small doses, but fully administered and in quick succession, as is necessary in the treatment of a disease in which the symptoms of every hour possess an untold value for good or for evil.

It may not be out of place to remark that a previous case of tetanus under my care likewise recovered. He was a lad, also with a crushed finger. In this case I amputated the member, administered croton oil, and produced rapid salivation. The after treatment consisted in the exhibition of sulphate of quinine.

For the particulars of the following case I am indebted to Mr. Nash, my house surgeon.

William P——, aged thirty-five, a healthy-looking man, crushed the last joint of the right forefinger on Feb. 11th, 1864, with a heavy iron roller. A fortnight afterwards (Feb. 25th) he applied at the hospital, when he was seen by Mr. Nash, who found the whole of the last phalanx exposed, denuded of periosteum, and dead, and who very properly removed it by operation, and closed the wound. In doing this the usual silver wire sutures were employed. No unpleasant symptoms ensued until two days afterwards, when the patient complained of stiffness in the lower jaw, a condition which he attributed to cold, and which, he added, had existed in a slighter degree from the former date (the 25th). When seen on the 28th he exhibited unmistakable evidences of trismus: the mouth could not be more than half opened, and there was some difficulty in the act of swallowing. He was admitted into the hospital, and, as the

bowels were confined, one minim of croton oil was immediately administered. He was ordered essence of beef and six ounces of port wine daily. Seven p.m.: The croton oil has acted freely. To take twenty-five minims of Battley's sedative solution at night.

Feb. 29th.—He slept well; bowels not open since last night; pulse 85. He thinks that he can open his mouth a little better, but the difficulty in swallowing is the same. His jaws "snapped" on several occasions during the night. One minim of croton oil to be repeated. I saw the patient at two p. m., and, as the bowels were still inactive, ordered two minims of croton oil immediately.—Seven p.m.: The bowels acted twice freely; the motions dark-colored and offensive.—Half-past ten p.m.: Has been purged since seven. He says that whenever he drops to sleep, the jaws "snap."

March 1st.—Slept badly, having been disturbed by a delirious patient. Bowels not opened since last note. Abdominal muscles tense.—Two p.m.: I ordered two grains of calomel and a third of a grain of opium every three hours until salivation was produced.—Seven p.m.: The bowels have acted twice. He says that he should be quite comfortable except for the difficulty in swallowing.

2nd.—Slept well; pulse 88; bowels open; abdominal muscles less rigid; the jaws open more freely; the gums touched by the mercury.

3rd.—The "snapping" of the jaws disturbed his rest; abdominal muscles less rigid; pulse 88.—Seven p. m.: Altogether not so well; the tongue is very sore; wound in the finger healthy and suppurating; pulse 96.

4th.—He was ordered one minim of the extract of the Calabar bean, (Messrs. Bell and Co.) in glycerine (equal to four grains of the powdered bean), every hour or every two hours, according to the effect.

5th.—Jaw tightly closed; pulse 104; abdominal muscles tense. Owing to some mistake of orders he discontinued the use of the Calabar bean after the third dose.—Noon; he was directed to resume the employment of the Calabar bean, one grain of the extract in glycerine every hour. He took one dose every hour till eight p.m.—equal to *thirty-two grains* of the powder. No perceptible effect, but he dropped off to sleep.—Twenty minutes past ten p.m.: He awoke and took another minim.

6th.—One a.m.: Awoke again, and says he feels easier. Ordered two drops of the extract of Calabar bean, equal to eight grains of the powder—Half-past eight a.m.: Spasms of the limbs; pain in the pit of the stomach; pulse 104—Ten a.m.: Has taken since noon of March 5th ourteen minims of the extract of Calabar bean, equal to fifty-six grains of the powder. (One bean weighs about a drachm.) No marked im-

provement.—Eleven a.m.: Ordered to discontinue the use of the Calabar bean. To produce continued sleep, half a grain of the acetate of morphia was injected beneath the skin; also the same quantity at one p.m. and four p.m. respectively. At one p.m. an enema of beef tea and brandy was administered.—Eight p.m.: In a deep sleep.—Ten p.m.: Pupils much contracted; still asleep.—Forty minutes past ten: He awoke, and drank twelve ounces of strong beef tea and two ounces of brandy. He says he feels better. Pulse 136. Injection of half a grain of acetate of morphia.

7th.—He awoke and took some beef tea and brandy. At ten minutes past two a.m., and again and half past eight and eleven, one grain of the morphia was injected hypodermically.—Forty-five minutes past five p.m.: Has slept continuously. Motions passed of a light color; has taken nourishment.—Twenty minutes past seven p.m.: Feels more comfortable. The morphia injection (half a grain) was repeated.

8th.—Ten a.m.: Injection of a grain of acetate of morphia; pulse 128.—Five minutes past two p.m.: The spasms are much diminished; he lies in a comfortable sleep; pulse 120, and feeble. Ordered five grains of disulphate of quinine to be administered three times a day at proper intervals.—Quarter past eleven p.m.: Injection of half a grain of the morphia.

9th.—One grain of the acetate of morphia injected. The "snapping" of the jaws diminished, and he moves his arms and speaks with ease.—Five p.m.; One grain and a half of the acetate injected.—Eight p.m.: One grain of the morphia injected.

10th.—Passed a good night. At fifty minutes past two, one grain, and at a quarter past eight two grains, of the acetate were injected.

11th.—He seems quite comfortable.—Quarter past eleven: Injection (two grains) repeated.

12th.—Convalescent.

22nd.—The medicines have been gradually discontinued.—*Lancet.*

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## REPORT OF A CASE WHERE A PORTION OF TOBACCO-PIPE WAS BROKEN INTO THE BLADDER.

### Successful removal after the use of the Lithotrite.

By Henry Smith, F.R.C.S., Assistant-surgeon to King's College Hospital.

J. H——, aged nineteen, was sent to my house on Saturday, Jan. 16th, by Dr. Riding, with the following story: Three months previous, having a difficulty in micturition, he conceived the idea of passing a long clay pipe down his urethra into his bladder. He was so success-

ful in his exploit that he repeated it ten days before I saw him, on a similar emergency occurring, but on withdrawing the pipe he found that it was shorter by at least iwo inches than it ought to be. Relying, however, upon the efforts of nature to expel the body, he consulted no one, although he had great pain and irritability of the bladder, which went on increasing until his parents, hearing his groans whilst he was passing urine, made him confess the accident. He was immediately taken to Dr. Riding, who sent him to me.

On introducing a sound, I at once struck the pipe, lying on the right side of the bladder. The urethra was fortunately a capacious one, free from stricture, and not at all sensitive. I sent him home, told him to go to bed, and retain his urine for three hours before my arrival, and on the same afternoon I proceeded to operate. I at first had some hopes of being able to extract the entire portion of pipe by means of a very fine lithotrite, but, either owing to my own awkwardness, or to the abrupt curve of the instrument, I had so much difficulty in introducing it that I changed my tactics, passed in an ordinary sized lithotrite, and, readily catching the foreign body, broke it in two pieces. I then seized one of the halves—the waxed end, as it proved to be, and broke it up. I then washed the bladder well out with warm water, using a catheter with very large eyes, but I got nothing away. At ten p.m. I called on the patient and found that he had passed about half of the waxed end of the pipe, and he was very comfortable. On calling the following morning, to my great astonishment I found that the patient had passed in its entirety the half unbroken portion of pipe, measuring exactly one inch and an eighth, and numerous fragments besides. On placing them all together it was evident that the whole two inches had come away. I washed the bladder well out on that and the following day, removing a quantity of powder and minute fragments of clay; and on the next day but one the patient walked a long distance to my house, free from every symptom.

This case is an interesting addition to the two cases recently published in THE LANCET, where, in the first instance, Mr. Ferguson removed an entire bougie from the bladder by means of a lithotrite, and in the second Mr. Henry Thompson was equally successful in extracting a hair-pin, and, together with them, it goes to prove what may be done with the lithotrite in cases of foreign bodies in the bladder. It is doubtful whether I could have succeeded in extracting two inches of a rigid body from the bladder along the urethral canal with safety had I introduced a proper instrument. However the result of the treatment I adopted, if not so brilliant a *coup de main* as in the cases referred to, was equally satisfactory. There is one reflection which this case suggests in reference to

perhaps the most important point connected with lithotrity—viz., as to the treatment of fragments. The speedy and spontaneous expulsion of the foreign body after it had been broken up, conveys the hint that we should be content with simply breaking up a stone, and leaving nature to do the rest. At the same time, however, it must be borne in mind that in this case the bladder was perfectly healthy; whereas in cases of stone we often meet with a bladder more or less diseased, sometimes partly or entirely paralyzed, and then we appreciate the value of that treatment which consists in extracting the greater portion or the whole of the fragments by means of a small and well-constructed lithotrite. I shall shortly have to detail perhaps one of the most extraordinary cases where this line of practice was adopted with great success.—*Lancet.*

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## MEDICINE.

### ON THE USE OF NITRATE OF SILVER IN THE PARAPLEGIA OF CHILDREN.

Dr. Bouchut employed the nitrate of silver internally in the case of a child, aged seven years, in the Hospital of Sainte Eugénie. The patient had had a fall from a height of a few feet, and immediately complained of acute pain in the dorsal region. From this time the child was unable to walk, and when she was placed upright the legs bent and sank down under the weight of the body. The speech became slow, difficult and indistinct, and the food partly escaped from the mouth during mastication. For nearly a month only the expectant treatment was adopted; but Dr. Bouchut then conceived the idea of treating the paralysis with nitrate of silver, according to the views of Wunderlich, Charcot, and Vulpian. He therefore prescribed one centigramme of the nitrate, divided into two pills, to be taken every day; and this treatment (occasionally varying the dose) was continued for more than a month with success, for at the end of this time the child left the hospital perfectly cured. Dr. Bouchut remarks that this was a case of paraplegia from direct violence, depending apparently upon a state of commotion of the spinal cord, and that the use of nitrate of silver was attended with manifest advantage. The expectant treatment had been tried without any avail, but as soon as the nitrate was employed the improvement became apparent: in twelve days the child began to walk alone, and at the end of six weeks of the treatment, the cure was complete. Although the nitrate of silver was successful in the present case, Dr. Bouchut thinks that it would not be a suitable medicine for cases of paraplegia in which

there are symptoms of acute inflammation of the spinal cord or its membranes.—*Bull Gén. de Thérap., Jan. 30th*, 1863.

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## ON THE INTERNAL EXHIBITION OF ATROPIA AND STRYCHNIA.

Dr. Fleming has for several years employed solutions of atropia and strychnia for internal use, and he prefers them to the ordinary preparations of belladonna and nux vomica, on account of their greater safety and efficiency. The solutions of both alkaloids employed by Dr. Fleming are so proportioned in strength that ten minims is the ordinary commencing dose, which easily admits of increase for the adult, and of diminution for the child. The solution of atropia is prepared from one grain of atropia, and five drachms of distilled water. The alkaloid is to be thoroughly dissolved with the aid of a few drops of hydrochloric acid, and sufficient rectified spirit is to be added to make ten drachms. This solution keeps well, and is of uniform strength, and ten minims of it, containing one-sixtieth of a grain of atropia, is the commencing dose for an adult. It should be given in a little water, once daily, at bed-time, and on an empty stomach. For children of one year, and all ages under one year, the commencing dose is one minim; of two years, two minims; of three years, three minims, and so on up to ten years, when ten minims may be given. The diseases in which Dr. Fleming uses atropia are epilepsy, asthma, constipation, and hooping-cough. He uses it *once* a day, because the action of one dose does not subside completely for sixteen or eighteen hours; and if a second is given before the effects of the first have passed away, there is a risk of producing cumulative action. It should be given on an empty stomach, because the dose of atropia requires, for its due action, to be promptly absorbed; and when mixed with the contents of a full stomach it enters the system very gradually, and manifests its usual effects very imperfectly, or not at all. This is one reason why the drug, when taken into the stomach of the rabbit, has no action, for it always meets there a large quantity of food, and mixing with it, enters the system very gradually. Several experiments made by Dr. Fleming have satisfied him that this explanation accounts in some measure for the immunity of grass-feeding brutes from the effects of certain poisons, for their stomachs are always full. Atropia should never be given in pill, which may undergo solution very slowly or not at all, lest when two or three pills accumulate in the stomach or bowels, they may, from some change in the gastro-intestinal fluids, be suddenly dissolved, and excite severe atropism.

The solution of strychnia is made with two grains of strychnia and five

drachms of distilled water; the strychnia is to be thoroughly dissolved by means of a little diluted hydrochloric acid, and rectified spirit is to be added to make ten drachms. This solution, like that of atropia, is uniform in strength, passes readily into the circulation, and the dose can be apportioned with accuracy. The commencing dose is ten minims, and contains one-thirtieth of a grain of strychnia. When employed for its *tetanic* action, the solution should be taken in the morning, half an hour before breakfast, and in half an ounce of water, and the dose increased two or four minims daily until a slight degree of its physiological action, such as stiffness about the jaws or neck, or spasmodic movements in the paralysed muscles, is manifested, when no further increase should be made. It should be given only once daily, to avoid the risk of cumulative action; it should be taken in the morning, so that its action may be over before bedtime, and the sleep be not disturbed; and it should be given on an empty stomach and diluted with water, to ensure its prompt and easy absorbtion. Strychnia should never be given in pill, for it is hard of solution in the weak acids of the stomach, and several pills may remain unchanged and accumulate there, or in the bowels. When the strychnia is employed as a *tonic*, the dose of the solution is five minims, and it may then be exhibited twice daily with safety and advantage.—*Edin. Medical Journal.*

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## CASE OF PYÆMIA SIMULATING ENTERIC FEVER.

### WITH ACUTE NECROSIS OF THE ILIUM, STERNUM, AND ACROMION, AND A PULSATING ABSCESS IN FRONT OF THE STERNUM.

By Charles Murchison, M.D., F.R.C.P., Physician to the London Fever Hospital; Assistant-Physician, Middlesex Hospital.

Henry A——, aged 18, was sent to the London Fever Hospital, as a case of "fever," on November 22nd, 1863. His history and symptoms on admission bore a close resemblance to those of enteric fever. He had been ill about nine days; he had suffered much from diarrhœa before admission, and a few hours after coming to the hospital he passed a light watery motion. The abdomen was tense and tympanitic, and there was considerable tenderness on pressure over the cœcum. The tongue was red and fissured, with the papillæ rather enlarged, and there was occasionally a circumscribed pink flush on both cheeks. Pulse 120; no headache or delirium; pupils dilated. Still, neither on admission nor at any time subsequently was an eruption discovered on the skin resembling that of either typhus or of enteric fever. On the other hand, from the first day that the patient came under observation the respirations were quickened—36 in the minute; there was a dry cough, and

there was slight dulness, deficient breathing, and diminished vocal resonance at the base of the left lung, extending as high as the lower angle of the scapula behind, and as high as the nipple in front.

The diarrhœa ceased on the day of admission into hospital, and after a few days the motions were found to be solid, but the tympanitis and abdominal tenderness continued, and the patient had sleepless nights with some delirium, necessitating a recourse to opiates.

On the 25th he began to complain of great pain in all the joints, increased by the slightest movement, but no swelling could be discovered, and there had been no rigors. The pain was particularly marked in both hip-joints when the patient was made to sit up in bed.

On the 26th there was an erythematous blush on the knuckles of the right hand.

On the 29th a similar redness, with great tenderness, was noticed on the dorsum of both big toes, and on the following day half an ounce of pus was let out by incision from beneath the skin over the dorsum of the left big toe. A dirty discharge continued to escape from the wound, which had an unhealthy appearance.

On December 3rd a soft fluctuating swelling made its appearance, somewhat suddenly, over the middle of the sternum. It was circular and nearly two inches in diameter, and the skin over it was moderately red. The remarkable circumstance, however, was that this swelling indicated most distinctly each impulse of the heart, and was rendered tense by coughing. Very little air could be heard entering the base of the left lung below the left nipple in front and the lower angle of the scapula posteriorly, and pleural friction was heard over the dull space in the axillary region. At first sight, the pulsating swelling, in connection with the dulness at the base of the left lung, suggested the idea of a pulsating empyema; but there was no bulging of the left ribs, the intercostal depressions were equally marked on both sides, and there was no displacement of the heart's apex. Pulse 104; respirations 36. On the following day the swelling had increased in size, and was very tender; its pulsating character was even more strongly marked than before. A small trocar was now introduced into the swelling, and about six drachms of laudable pus, not at all fœtid, let out. No more could be obtained, although the patient was turned on his right side. The pain, redness, and pulsation subsided at once with the disappearance of the swelling. Poultices were applied; but the opening closed up, and by the end of twenty-four hours the swelling had returned with its former characters, and with such an amount of pain and dyspnœa, that a free incision was made into it, and about an ounce of bloody pus let out.

On December 16th there was still much distress in breathing. Pulse 108; respirations 40. A thin sero-purulent discharge escaped from the wound, which was not increased by turning the patient on either side. During respiration the air passed inwards and outwards through the wound. On introducing a probe, it passed completely through the sternum by a channel surrounded on all sides by bare bone. When the probe was left in, it moved upwards and downwards synchronously with the action of the heart. At the situation of the opening, the lower third of the sternum was separated from the upper two-thirds, and the two pieces of bone could be made to move upon one another with a grating noise.

Considerable relief was obtained from the free exhibition of opiates and stimulants; but on December 11th the patient appeared much worse. He had become very emaciated. There was a deep red circumscribed flush on both cheeks. Tongue try in the centre. Pulse 112, very feeble. Breathing at times was very hurried, at others, tolerably full and easy. Nearly two ounces of pus were let out by an incision made at the top of the right shoulder. This abscess did not seem to have any connection with the shoulder-joint. The physical signs of the chest did not indicate any extension of the pulmonary mischief.

The dyspnœa increased. Great pain and distress were occasioned by the two portions of sternum riding over, and grating on each other during respiration. On December 12th the lad's face was very dusky, and he was evidently sinking, and at six p.m. he died, his entire illness having lasted about thirty days. The skin did not present the slightest tinge of yellow, and at no stage of his illness had there been any rigors.

*Autopsy Forty-four Hours after Death.*—Body much emaciated. Right thigh and leg swollen and œdematous; left lower limb not so. The right femoral vein was compressed by an abscess beneath the fascia at the upper and anterior part of the thigh, which contained about an ounce of pus. On laying open the abscess above the right shoulder, the extremity of the acromion was found exposed and dead, and a portion of necrosed bone the size of a pea was loose and detached. The shoulder joint was intact. Chest.—The artificial opening in the skin led into an empty circumscribed cavity behind the sternum nearly two inches in diameter, bounded in front by the sternum itself, which was bare and black, and posteriorly by the ligaments and aponeurosis. At the level of the third rib, the sternum was completely separated into two pieces at what appeared to be a natural articulation. An inch and a-half of the lower portion and half an inch of the upper were quite bare, and of a dark hue on their posterior aspect. The opposed ends of the two pieces

could be made to overlap to the extent of a quarter of an inch. The left pleural cavity contained half a pint of puriform fluid. The outer surface of the lower lobe of the left lung and the corresponding costal pleura were of a deep red color, and were glued together by a quantity of soft yellow lymph. The lower lobe of the left lung was condensed (at many places sinking in water) and tough, as if from pressure of pleuritic fluid. Its section was nowhere granular. The lower lobe of the right lung was œdematous, and in its substance, near the anterior margin, was a circumscribed cavity the size of a hazel nut filled with thick yellow pus. The pleural surface of the lower lobe was coated with a few flakes of recent lymph, which were most abundant along the free margin of the base. There was no communication between either pleura and the post-sternal abscess. The pericardium contained four ounces of clear straw-colored serum; the lining membrane of the right cavities of the heart was stained of a deep red hue; the right cavities contained a small coagulum partially decolorised. The valves and muscular tissue of the heart were normal. Abdomen and Pelvis.—There was no fluid or lymph in the peritoneum. Liver and spleen healthy. Both kidneys much injected, and both, especially the left, contained several circumscribed deposits of pus, up to the size of a pea. The stomach and intestines were healthy; there was no abnormal injection or elevation of Peyer's patches, or of the solitary glands. There was a large abscess containing fully a pint of pus in the concavity of the right ilium. The bone over a space measuring two and a-half inches in diameter was quite bare and bathed by the pus; this exposed portion of bone was of a dark hue, and surrounded by a distinct line of demarcation in the form of a superficial groove; the abscess extended some inches downwards, behind the pelvic fascia, towards the perinæum; the right psoas muscle passed through it, and was surrounded by the pus. The right sacro-iliac joint was laid open, and the ligaments and cartilage destroyed, so that the finger could be inserted between the bones; and when the limb was rotated, there was considerable movement of the one bone upon the other. The lumbar vetebræ were not reached by the pus, and appeared healthy; there was also an abscess containing several ounces of pus outside the pelvis over the convexity of the right illium. This abscess communicated with that within the pelvis through the sacro-iliac joint. The right ilium, on its convex aspect, was also bare and bathed by pus over a space measuring about two inches in diameter. The bone here resembled the bare bone on the inner surface, and corresponded to it in situation. Two other abscesses were discovered, one beneath the fascia at the upper and anterior part of the right thigh already described, and

another containing about an ounce of pus in the substance of the left iliacus muscle, but in no way implicating the bone.

*Remarks.*—This case presented some remarkable features in reference to diagnosis. The early symptoms were closely assimilated to those of enteric fever, and the resemblance was increased by the existence of tympanitis and tenderness over the cœcum. The absence of rose spots, which were carefully looked for every day, was the sole point of distinction; but even in enteric fever these spots are not of universal occurrence. The pulsating tumor over the sternum might, at first sight, have been readily mistaken for an aneurism or a pulsating empyema; but the rapidity of its development, and the absence of the ordinary physical signs of empyema, negatived both of these suppositions. As regards the pyæmic nature of the case, the complete absence of rigors or of any peculiar discoloration of the skin is worthy of notice. The origin of the whole mischief is somewhat obscure. The boy had sustained no wound or injury, that could be discovered to account for the pyæmia; he had no sign of scrofula, nor was there any absolute proof that the pyæmia resulted from the circulation of any specific poison in the blood. The condition of the intestines showed that there had been no enteric fever; but it may be mentioned that the boy came from a locality where typhus was very prevalent, and although no eruption could be discovered on his skin, it is not impossible that he had passed through an attack of typhus before he came under observation. A formidable form of pyæmia, with purulent deposits in the joints, is well known to supervene occasionally upon attacks of typhus in certain epidemics, although this sequela has certainly been rare of late years in London. Surgical writers also speak of acute necrosis as not uncommon in "those debilitated states of the constitution that so frequently follow upon typhus fever." At the same time, it is right to add that the boy's symptoms before he was brought to the hospital were not those of typhus fever, and therefore I am inclined to conclude that the acute necrosis and pyæmia were the common result of some other unknown morbid condition of the blood.—*Medical Times and Gazette.*

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## TRICHINIASIS IN GERMANY.

A FEW months ago there was a festive celebration in Hettstädt, a small country town near the Hartz Mountains, in Germany. Upwards of a hundred persons sat down to an excellent dinner, and having enjoyed themselves *more majorum*, separated and went to their homes.

Of these one hundred and three persons, mostly men in the prime of

life, eighty-three are now in their graves; the majority of the twenty survivors linger with a fearful malady; and a few only walk apparently unscathed among the living, but in hourly fear of an outbreak of the disease which has carried away such numbers of their fellow-diners.

They had all eaten of a poison at that festive board, the virulence of which far surpasses the reported effects of *aqua tophana*, or of the more tangible agents described in toxicological text-books. It was not a poison administered by design or negligence; it was a poison unknown to all concerned; and was eaten with the meat in which it was contained, and of which it formed a living constituent.

When the festival at Hettstädt had been finally determined upon, and the dinner had been ordered at the hotel, the keeper of the tavern arranged his bill-of-fare. The introduction of the third course, it was settled, should consist, as usual in those parts of the country, of *Rostewurst und Gemüse*. The *Rostewurst* was, therefore, ordered at the butcher's the necessary number of days beforehand, in order to allow of its being properly smoked. The butcher, on his part, went expressly to a neighoring proprietor, and bought one of two pigs from the steward, who had been commissioned with the transaction by his master. It appears, however, that the steward, unfortunately, sold the pig which the master had not intended to sell, as he did not deem it sufficiently fat or well-conditioned. Thus the wrong pig was sold, carried on a barrow to the butcher, killed and worked up into sausages. The sausages were duly smoked and delivered at the hotel. There they were fried and served to the guests at the dinner-table.

On the day after the festival, several persons who had participated in the dinner were attacked with irritation of the intestines, loss of appetite, great prostration and fever. The number of persons attacked rapidly increased, and great alarm was excited in the first instance by the apprehension of an impending epidemic of typhus fever or continued fever, with which the symptoms observed showed great similarity. But when, in some of the cases treated by the same physician, the features of the illness began to indicate at first acute peritonitis, then pneumonia of a circumscribed character, next paralysis of the intercostal muscles and the muscles in front of the neck, the hypothesis of septic fever, though sustained in other cases, had to be abandoned with respect to these particular cases. Some unknown poison was now assumed to be at the bottom of the outbreak; and an active inquiry into all the circumstances of the dinner was instituted. Every article of food and material was subjected to a most rigid examination, without any result in the first instance. But

when the symptoms in some of the cases invaded the muscles of the leg, particularly the calves of some of the sufferers, the description which Zenker had given of the fatal case of trichinous disease was remembered. The remnants of sausage and of pork employed in its manufacture were examined with the microscope, and found to be literally swarming with encapsuled trichinæ. From the suffering muscles of several of the victims small pieces were excised, and under the microscope found charged with embryonic trichinæ in all stages of development. It could not be doubted any longer, that as many of the one hundred and three as had partaken of *Rostewurst* had been infested with trichinous disease by eating of trichinous pork, the parasites of which had, at least in part, escaped the effects of smoking and frying.

This awful catastrophe awakened sympathy and fear throughout the whole of Germany. Most of the leading physicians were consulted in the interest of the sufferers, and some visited the neighborhood where most of the afflicted patients remained. But none could bring relief or cure. With an obstinacy unsurpassed by any other infectious or parasitic disease, trichiniasis carried its victims to the grave. Many anthelmintics were arrayed to destroy, if not the worms already in the flesh, at least those yet remaining in the intestinal canal. Picric acid was employed until its use seemed as dangerous as the disease; benzole, which had promised well in experiments upon animals, was tried but was unavailing. As case after case died off, and the dissection of each proved the parasites to have been quite unaffected by the agents employed, the conviction was impressed upon every mind that a man afflicted with flesh-worm is doomed to die the slow death of exhaustion from nervous irritation, fever, and loss of muscular power, in systems essential to existence.

But medical science had only just unravelled a mystery; and if it could not save the victims, it was determined at least, to turn the occasion to the next best account. The cases were, therefore, observed with care, and chronicled with skill. All the multifarious features of the parasitic disease were registered in such a manner, that there can hereafter be no difficulty in the diagnosis of this disorder. A valuable diagnostic feature was repeatedly observed—namely, the appearance of the flesh-worm under the thin mucous membrane on the lower side of the tongue. The natural history of trichina in man was found to be the same as that in animals.

All observations led to the conviction that the trichina encapsuled in the flesh is in the condition of puberty. Brought into the stomach, the calcareous capsule is digested with the flesh, and the trichina is set free. It probably feeds upon the walls of the intestines themselves; for the

irritation of the intestines begins before the bringing forth of young trichina has taken place. Copulation is immediately effected; and within a few hours, or a short portion of days, from sixty to eighty live embryos leave the female, and begin their own career of destruction.

This consists, in the first instance, in an attempt to pierce the walls of the intestinal canal. Great inflammation of the entire surface ensues, ending not rarely in death of the villous or mucous membrane, or in the formation of masses of pus on its surface. Sometimes there are bloody stools. But these severe symptoms only ensue when much trichinous meat has been eaten. When less has been consumed, pain and uneasiness in the abdomen are produced, accompanied, however, in all instances by wasting fever and prostration. The embryos actually pierce the intestines, and are found free in the effusion, sometimes serous, sometimes purulent, which is always poured out into the abdominal cavity. Thence they again proceed towards the periphery of the body, pierce the peritoneum, causing great irritation, and sometimes peritonitis, to the extent of gluing the intestines together to a coherent mass. They next proceed to the muscles nearest to the abdomen; arrived at the elementary muscular fibres, which, under the microscope, appear as long cylinders with many transverse striæ, they pierce the membranes, enter the fibres, eat and destroy their striated contents, consume a great part of the granular detritus, moving up and down in the fibres until grown to the size necessary for passing into the quiescent state. They then roll up in spiral or other irregular windings, the bags of the muscular fibres collapse, and only where the trichina lie, a calcareous matter is deposited, perhaps by the trichina themselves, which hardens into perfect capsules round the parasites. A muscular fibre may harbor one or several parasites; but every fibre invaded by a single parasite loses its character entirely, and becomes a bag of detritus from one end to the other.

If it be remembered that one ounce of meat filled with trichina may form the stock from which, in a few days, three millions of worms may be bred; and that these worms will destroy in the course of a few weeks not less than two millions of striated muscular fibres—an idea of the extent of destruction produced by these parasites can be formed. We are not in a position to say to what proportion of the fifty or sixty pounds of muscle required for the performances of the human body these two millions of elementary fibres actually amount. In the muscles nearest to the abdomen, the destruction is sometimes so complete that not a fibre free from parasites can be found. This amounts to complete paralysis. But death is not always produced by the paralysis; it is mostly the

result of paralysis, peritonitis, and irritative fever combined. No case is known in which trichiniasis, after having declared itself, became arrested. All persons affected have either died, or are in such a state of prostration that their death is very probable.

Most educated people in Germany have, in consequence of the Hettstädt tragedy, adopted the law of Moses, and avoid pork in any form. To some of the large pig-breeders in Westphalia, who keep as many as two thousand pigs, the sinking of the price of pork has been a ruinous—at the least, a serious—loss. In the dining rooms of the hotels in the neighborhood of Hettstadt, notices are hung up announcing that pork will not be served in any form in these establishments. To counteract this panic, the farmers' club of the Hettstadt district gave a dinner, at which no other meat but pork was eaten. But it has had no appreciable effect. The raw ham and sausages of Germany are doomed to extinction. The smoked and fried sausages must necessarily be avoided.

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In the south of Germany, some people now say that the Hungarian pigs are most frequently affected with trichina. This rumor, like the famous pork dinner of the farmers' club, may, however, have been set up with the intention of quieting apprehension about the native pigs. We have already mentioned the accident which befell the crew of a merchant vessel. They shipped a pig at Valparaiso, and killed it a few days before their arrival at Hamburg. Most of the sailors ate of the pork in one form or another. Several were affected with trichina, and died. Of those whose fate could be inquired into, only one seems to have escaped parasites. Another outbreak in Saxony has carried away twelve persons. A fourth wholesale poisoning by trichina is just reported from Offenbach, the Birmingham of Hesse-Darmstadt. Of upwards of twenty persons infected, three had already died when our correspondent's letter left. Numerous sporadic cases of fever, and epidemics of inscrutable peculiarity, but referred to an anomalous type of fever, are now claimed by medical authors, and with much show of reason, to have been outbreaks of trichiniasis, or flesh-worm disease. Several German physicians experimentalized with a view of finding a cure for this terrible disorder. Professor Eckhardt at Giesen, we are told, has obtained permission to try the disease and supposed remedies upon a murderer under sentence of death. We have not been told whether his reward in case of success is to be a commutation of his capital sentence; but should hope this to be the case. The experiment, even if it should not have the romantic character indicated, will probably teach some curious details of the life of these parasites. Almost everywhere, the commonest rules of cleanli-

ness are disregarded in the rearing of pigs. Yet pigs are naturally clean animals, avoiding like dogs and cats, all contact with ordure. Though they burrow in th· earth, and in summer wallow in the mud, they abhor the heaps of excrements mixed with straw in and upon which they are frequently kept. A due regard to cleanliness will prevent trichina in the pig. In wild boars, of which many are eaten in the country round the Hartz Mountains, trichina has never been found. Neither has it been met with in sheep, oxen, or horses. Beef is the safest of all descriptions of meat, as no parasites have ever been discovered in it. They have also never been found in the blood, brain, or heart, of those animals in whose striated muscles they love to reside.—*British Medical Journal.*

[Lately, the common ground-worm has been found to be infested by trichina, one of the probable sources of the infection of swine.]

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## TREATMENT OF DYSENTERY BY NITRATE OF SILVER.

Dr. Berger calls attention to the treatment of dysentery by nitrate of silver. His attention was directed to the employment of it by the ravages caused by dysentery among the soldiers in 1848–9 during the Italian war, in spite of the use of the most varied and best authorized means. His communication is founded on his treatment by this agent of ninety-nine cases in the Military Hospital at Traiso, only three of which proved fatal. In the mildest cases in which there is only hyperemia and superficial erosion of the mucus membrane of the intestinal canal, the fæces being mixed with spawn-like, translucent masses of slime, the tenesmus moderate, a regulated diet and mild therapeutical measures suffices for a cure. In cases of the next degree of severity, where there is inflammation of the mucus membrane, and commencing ulceration, a cure may be effected by mucilagous mixtures, and a clyster, with ten to fifteen drops of tincture of opium, every three or four hours, with warm poultices. Ipecacuanha, he considers, removes the gastro-billious symptoms which often accompanies dysentery, without exercising any influence upon the disease itself; of the operation of calomel and opium he has no experience. When the above simple method of treatment fails, and symptoms of advancing ulceration are present, recourse must be had at once to clysters of nitrate of silver. The internal exhibition of it, in pills or solution, as recommended by Bamberger, is of no use; but employed locally, no other means has so lasting and salutary an effect upon the disease. A clyster of nitrate of silver, grs. vi. to gr. viii. and even grs. x., to three ounces, with a few drops of tincture of opium, is to be given three or four times in the twenty-four hours. A mucilaginous vehicle weakens

the favorable cauterizing effect of the salt. Small doses as recommended by Gros—or clysters given at long intervals, are uncertain, and delay the cure. These means are to be continued—so long as stools appear—one to three days. Afterwards an emulsion of castor oil is necessary. The patient must be kept in bed, and his diet regulated.—*British Medico-Chirurgical Review, January*, 1864.

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## A CASE OF TRAUMATIC TETANUS TREATED BY ACONITE AND NICOTINE.

The following case occurred under the care of Mr. Cam, at the Hereford Infirmary:—

Thomas L——, aged 37, a gentleman's servant, on the 20th of Feb. last met with an accident from a thrashing-machine, which deprived him of the index, and portions of the middle and ring fingers of the left hand, the laceration extending about an inch into the dorsum and palm. The wound had been dressed by a Surgeon, and he was admitted into the Infirmary on February 22, when the sutures were removed and replaced by adhesive plaster. He was in his usual health, and the hand looked well.

On March 1, the tenth day after the injury, he complained of stiffness between the shoulders, and on the 3rd took to his bed. He was then flushed and perspiring, and troubled with dyspnœa. A dose of calomel and colocynth was administered, and a free evacuation of the bowels followed. On the evening of the next day (4th) the stiffness had extended to the jaw, and he had had some muscular twitches. Two grains of calomel and a quarter of a grain of opium were given every four hours during the night.

5th.—This morning the symptoms were much more marked, the teeth were clenched, the corners of the mouth retracted, giving to the countenance a peculiar smile; the cervical muscles rigid and prominent; lumbar and abdominal muscles hard. He had pain at the pit of the stomach extending to the back, and frequent but not severe opisthotonic spasm; deglutition not seriously impaired; the skin was bathed in perspiration; pupils contracted; pulse 120; respiration 34 per minute; mind calm, and free from extreme anxiety. Wine and beef-tea *ad libitum* were ordered, and half a grain of extract of cannabis indica given every three hours, the dose being increased to a grain hourly, and finally to two grains.

6th.—He had a bad night; the spasms continue, especially on the approach of sleep. Ordered eight minims of Fleming's tincture of aco-

ite immediately, to be followed by four minims every hour. 8 p.m.—The spasm and rigidity have somewhat diminished, the former affecting chiefly the muscles of the hip and thigh. He lies with the lower extremities semi-flexed; pulse 100—96; pupils natural. He takes food at intervals.

7th.—Has slept a little during the night; spasms unaltered; pulse 104; respiration 32 The dose of tincture of aconite increased to six minims hourly, and an aperient administered consisting of one drop of croton oil and ten grains of extract of colocynth, which acted freely. 9 p.m.—Rigidity much less; spasms in lower extremities frequent, but not very painful; slight opisthotonos; pulse and respiration unchanged; supuration in wound much diminished. He has felt some tingling of the fingers to-day for the first time.

8th.—A good night, with more sleep than heretofore; the spasms are weaker; pulse 84; surface warm and perspiring; pupils natural. At 5 p.m. the dose of tincture of aconite was increased to eight minims hourly. 6 p.m.—Pulse 100; respiration 32; the spasms are rather more violent; tingling of hands and feet continues.

9th, 1 a.m.—The spasms are stronger than they have been before, and appear to cause him intense pain. He cries loudly when they come on. At half-past twelve eight minims of the aconite were administered, and now ten additional minims—these large doses not having the effect of controlling or even weakening the violence of the attacks. At half-past one a drop of nicotine dissolved in spirits of wine and added to two tablespoonfuls of wine, was given. His pulse was then 120; respiration 32. In less than five minutes his eyes closed, and he became more tranquil, breathed more freely, and within twenty minutes fell into a sound sleep of one hour's duration. 2 a.m.—Pulse 108. 3 a.m.—Pulse, 92. He is able to put out his tongue. Sweating continues, but clammy, and devoid of snuff odor. 5 a.m.—He took a second drop of nicotine. 9 a.m.—Has had three or four hours' sleep, is refreshed, and complains but little of pain 2 p.m.—During the morning he had frequent slight spasm, but slept at intervals. Rigidity of upper and lower extremities, and masseters continues. Pulse, 100; pupils natural. Given one drop of nicotine. 4 p.m.—Nicotine repeated. 10 p m.—Pulse 140; respiration 36—40. Has rambling delirium; the arms are curved; spasms continue, and affect the right arm more than the left.

10th. 10 a.m.—Pulse 120. Abdomen covered with a pustular-looking eruption. Lower maxilla falls as he dozes; but he is unable to open his mouth. He died at 11 this morning after severe convulsion.

*Remarks.*—The above case appears to confirm the observations of Pro-

fessor Haughton, of Dublin, on the use of nicotine in tetanus. It can, scarcely, however, be said to have afforded a fair test of the value of that alkaloid, inasmuch as it was not employed until the ninth day from the commencement of the symptoms, and when the disease was in active progress. Its influence over the severe spasm and its capability, in some cases at least, of alleviating acute suffering and procuring sleep will, I conceive, place it in a high rank among those means by which this fatal disease is henceforth to be combated. It may not be unworthy of remark that the treatment with aconite was during the early period satisfactory; and that much of that peculiar resistance to the specific action of powerful agents which characterizes this disease was manifested during the exhibition of the latter remedy.—*Medical Times and Gazette.*

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*Discharge of a Portion of the Ileum per Anum.*—Dr. Bare relates the case of a woman who, jumping from a fence, felt something give way in the abdomen, causing severe pain. When he saw her four hours afterwards, the pain, seated below and to the right of the umbilicus, had become excruciating, and the skin being cold and clammy, the pulse thready and 122, and the thirst incessant. Believing this to be an example of intussusception of the ileum, Dr. Bare studiously avoided all means calculated to increase peristaltic action, gave large doses of opium and morphia, with an occasional blue pill. Demulcents, with laudanum, were also injected. On the third day the bowels were evacuated by means of a more stimulating injection, and the abdomen being distended, a large blister was applied. On the fifth day, air passed through the intestines. On the seventh day, castor-oil and landanum were given; and from the eight to the tenth days, excessive diarrhœa prevailed, requiring acetate of lead and opium. The patient's strength was kept up by injections of chicken-broth; and on the thirteenth day a portion of intestine, about thirteen inches long, was discharged. From this time the patient gradually recovered, and six months after only suffered from indigestible food as it passed the stricture.—*American Quarterly Journal.*

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*Syphilitic Disease of the Brain.—Recovery.*—A woman aged 30 was lately admitted into the Lariboisière Hospital, with a well marked pustular syphilitic eruption on the arms. During several weeks she complained of very severe occipital headache, she had obstinate vomiting, in consequence of which, the iodide of potassium, which had been given her, produced no effect. The patient now began to grow feeble; she stumbled, walking became more and more difficult, and at last she was con-

fined to bed. While lying down, she had perfect voluntary power over both lower and upper limbs; there was therefore no ordinary paralysis, nor wasting palsy, but great muscular weakness. She had also double convergent squint, complicated with diplopia. The intellect and sensation, and the principal functions, remained intact. She had no fever nor cough; nutrition was interfered with by the vomiting. A syphilitic affection of the cerbellum was diagnosed. Mércurial treatment was employed, and in a week there was marked improvement. The pain in the head was less, and the vomiting ceased. The patient recovered her strength, and was soon able to sit up, and to stand; the squint also disappeared. At the end of six weeks she was dismissed, cured, and when seen some time afterward, remained well.—*Gaz des Hospitaux, Mars*, 1864.

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## MEDICAL NEWS.

On the 11th March last a physician in Paris was brought before the *Tribunal Correctionnel* charged with having revealed the secret disease of one of his patients; and by the judgment of the Court he was condemned to a year's imprisonment, and a fine of 500 francs, with costs. At the expiration of his sentence, he is to remain under the *surveillance* of the police for five years, and to pay the plaintiff 1000 francs for damages, or in default go to prison for another year.

During the past winter session, at New York, Boston and Philadelphia, the number of students in attendance was largely in excess of the previous winter.

The town Council of Liverpool, England, have adopted a bill enabling the Corporation to borrow £100,000 for the sanitary improvement of the town. The death rate has been very large there the last few years, owing to the overcrowding of that portion of the town occupied by the laboring classes.

*A new cure for Pertussis.*—Several children suffering from whooping-cough at Calais, France, have been taken to the gas works of that town, and caused to in hale the fumes which are disengaged during the purification of gas by lime. The success is said to have been very remarkable; great relief following the first visit, and two or three visits sufficing to complete the cure.

Dr. Thomas Watson has been re-elected President of the Royal College of Physicians, London. Immediately after his election he presented the College with fifty volumes of medical works, chiefly American. He

had received them as a donation from Messrs. Blanchard & Lea, of Philadelphia. This firm had published Dr. Watson's lectures, without permission; and as they had profited by their publication, had sent, of their own accord, the volumes in question. Dr. Watson thought they would be more useful upon the shelves of the College than in his private library.

A very extraordinary trial for murder is going on in Paris. The person accused is a physician named La Pommerais, and the charge against him is the poisoning of Madame Pauw by digitalis, between September and November last year. The circumstances of the murder, as related in the official indictment, are that La Pommerais induced Madame Pauw to effect insurances upon her life in eight offices, to the amount of 500.000f. This being done, he prevailed upon her to assign all the policies to himself, and, in fact, to make over her entire property to him by will. He then suggested that she should pretend to be seriously ill, and make the insurance offices believe that she was on the point of death, in order that he might induce the companies to cancel the policies, on the terms of paying her a life annuity of 600 francs a year. The foolish woman assented to this arrangement, and in order to give better effect to the trick she proposed to play upon the doctors sent to see her by the insurance companies, she allowed La Pommerais to physic her. This he did so effectively, that Madame Pauw at last fell a victim to her own avarice and credulity, and died. Immediately after her death, La Pommerais began to use the deeds he had induced Madame Pauw to sign, and he applied for the 500,000f. for which her life had been insured. Suspicion, however, was by this time awakened, and he was arrested on the charge of having murdered Madame Pauw by administering to her doses of the subtle poison digitalis. This is the substance of the present indictment. There is also another charge against La Pommerais, accusing him of having poisoned his mother-in-law in 1861.

*Trichinial Infection.*—While removing a cancroid growth from the neck of a patient arrived from the country, Dr. Langenbeck remarked that the Platysma presented an unusual appearance. Microscopic examination, showed that it contained an immense number of dead trichinæ, contained in calcified capsules. Inquiry was made, as to the circumstances under which the immigration had probably occurred, and the following was the result: In 1845 a commission, composed of eight persons, went to a town in the district of Lawsitz, to inspect the schools. A collation composed of hams, sausages, roast veal, and white wine, was

served to the commission; only seven of the members partook of it, the eighth was absent at the time and only took a glass, of red wine at dessert. Three or four days after, the seven who had partaken of refreshment, were seized with intense diarrhœa, pain in the neck, and œdema of the face and extremities. In four the attack proved fatal, and the other three, including the person on whom M. Langenbeck, had operated, only recovered after a tedious illness.—*Edin. Medical Journal.*

*Per Chloride of Iron and Collodion.*—This combination is of great use as a hœmostatic in cases of cuts, leech bites, &c. One part of the crystallized perchloride of iron is to be dissolved in six parts of collodion; but this must be done very gradually, or the heat which is produced will cause the ebulition of the collodion. The mixture is a yellowish red, limpid fluid, which, when applied to the skin gives rise to a small yellow pellicle possessed of great elasticity.—*Reine Med., Nov.* 15*th*, 1863.

In April an inquest was held in Liverpool upon a man named Lingard, who died from taking five grains of strychnia, instead of five grains of James' powder, which had been prescribed for him. The mistake was made by a druggist's assistant, the two medicines being in similar bottles, and near each other. The Jury returned a verdict of culpable negligence against the assistant.

The British army Medical Department are advertising for doctors for "temporary service." Pay to be at the rate of ten shillings per day, and allowances equal to those of a staff Assistant Surgeon. No one over forty years of age need apply. There is something wrong in the management of this department, which in time of peace, renders such a call necessary.

Five resident Physicians of Bellevue Hospital, New York have lately died from typhus fever, contracted while attending to their professional duties, and three others are now dangerously ill with the same disease.

It has been decided that the King and Queen's College of Physicians, Ireland, has no right to grant the degree or title of Doctor of Medicine.

# Canada Medical Journal.

MONTREAL, JULY, 1864.

In assuming the task of the editorial conduct of a medical periodical (to be, we tru t, the organ and representative of the medical profession in Canada), we are induced to hope that our attempt will be rightly appreciated, and that our professional brethren will extend to us that assistance,—not alone pecuniary,—without which this journal cannot long continue. We are all bound by a common tie, that of advancing the best interests of our noble calling, and as a portion of a great fraternity, to emulate those who have devoted their time and energies in advancing the science of medicine and surgery. Past experience has shewn a decided indifference on the part of members of our profession to publish the results of their observations: is it because there are few who take the trouble to observe? No! Is it because there exists a sense of unworthy rivalry peculiar to medical men? Again we would say, no! Why, then, what is the reason, that here in this extended country, numbering its physicians by thousands, there should exist so marked a diffidence, so decided a disinclination, to communicate to one another the experience gained by bedside observation. It becomes a duty incumbent on all, and is for the general good: it is *the talent, delivered for a season to our keeping*, which should not be wrapt in a napkin and buried in the earth, but be ma le use of, that we may be prepared to yield to him who giveth, his own with usury. To the surgeon we say, that as a true surgeon he should publish the results of all his important cases, be they successful, or the reverse. In a statistical point, and in view of the justifiableness of any given surgical operation, the result of each case becomes but a continuation of the history of the whole. The same may be said of medical cases, and of obstetric observation; but inasmuch as these latter are of more frequent occurrence,—some of epidemic character in some localities, and at certain seasons,—we suggest the propriety of keeping accurate notes of any given disease, with any peculiarity or complication, and submit them, with any peculiar system of treatment which may have been specially beneficial. We would remind our readers that in Canada

there are six medical schools, each enjoying the advantage of large hospitals, and dispensaries. Assuredly we do not expect too much, in looking to the officers of these institutions for help, in the way of original communications of worth and general benefit. We do not depend alone upon this source: we look forward with confidence to the intelligent practitioners throughout the country,—and their name is legion,—to give the results of their observations. New and peculiar phases of disease are of daily occurrence: many there are capable (aye, and we feel willing,) to give to the world their bed-side experience. It is to be hoped that all will become identified in the good work; for, as we said before, this journal can alone be sustained by the united efforts of all. Let every man feel that he is personally interested in its success. We devote ourselves to the task: we are, gentlemen, your servants, working for the common weal: will you assist us, not alone by your subscription,—that of course is a necessity, without it the printer cannot live,—but what we regard of equal importance, a fair and meritorious contribution of bedside observation. Many we believe there are who, possessing the ability, will be stimulated to respond freely and heartily to our call for aid, and give to the Canada Medical Journal a permanent existence. To you we leave the issue.

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## THE CAUSE OF THE INNOCENTS.

We resume the publication of tables of mortality compiled from the returns of interments in the City Cemeteries, and however unreliable and defective they may be, they at least serve to show the actual death rate. On a former occasion we drew attention to the necessity of enforcing a uniform system of enregistration, pointing out the defects which existed, and suggesting as a type to be copied with advantage, the laws and ordinances relative to the preservation of the public health in the city of New York. It is to be regretted that so little notice has been taken of this important subject. We cannot too urgently call upon our city authorities to mark the increasing mortality, especially among infants. A careful search into the causes which lead to this waste of human life, and the best means of applying the remedy becomes an imperative duty on our health committee What has become of the notices of motion which have been laid on the table of our City Council to appoint a medical commission, with the avowed object of investigating into these causes, and of giving a report on the best means of removing them—have they fallen through, or is the suggestion to form a large public slaughter house, deemed sufficient? What is the health committee doing? We ask for information. We have heard it rumored that

nothing is to be done, until the present improved system of drainage, (which is far from perfection,) has been tested. Is this not trifling of the very worst nature, where such high interests as the lives of our fellow beings are at stake? It is not necessary that we should quote the results of commissions for like purposes in all the large cities of other countries, the annals are before the world, and the beneficial results form the subject of comment by all writers on sanatory reform. Will not our city fathers awake from their lethargy, and follow in the wise footsteps of similarly constituted bodies of cities of any size among civilized nations in the known world?

It will be observed that we commence with the months of January and February of the current year, and that there may be no loss of reading matter to subscribers, the publishers have added four extra pages. The mortality tables are accompanied by the Meteorological Observations of Dr. Smallwood, kindly furnished by him, in which are carefully noted the amount of ozone observed in the atmosphere, a substance said to have much connection with the occurrence of epidemic disease. This subject is at present in its infancy, many conflicting opinions existing. We trust that the facts here recorded may induce observers in other parts of our country to establish similar comparisons.

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## McGILL UNIVERSITY.

The winter Session of the University of McGill College closed on the 2nd of April last, the number of students in attendance being 177. On the 5th of May the annual convention for conferring degrees in Medicine and Law, was held in the William Molson Hall of the University. The weather was unpropitious, yet notwithstanding which, there was a large gathering of the *elite* of Montreal. Dr. G. W. Campbell, Dean of the Faculty, announced that the prizes given by the Medical Faculty had been awarded as follows:

William Wood Squire, M.A., for the best thesis; Daniel Howard Harrison, for the best final examination; Kenneth Reid, for the best primary examination; Messrs. Bullen, Reid, Kempt, and Church's theses, were considered worthy of competing for the prize; William Wood Squire, M.A., Herbert Tew, Professors' prizes in clinical medicine; W. H. Fraser, Professor's prize in botany; W. H. Fraser, Professor's prize in zoology.

The graduating class were then severally presented, and received the degree of Doctor of Medicine, and Master in Surgery. The following are their names, places of residence, and subject of their theses:

William Wood Squire, M.A., Montreal, C. E., Pathology and Treatment of some forms of Partia lParalysis; Griffith Evans, Montreal, C. E., Pathogenesis and Histology of Tuberculosis; James Patterson, Almonte, C. W., Fractures of the Femur; David Howard, Harrison, St. Marys, C. W., Bronchitis; Herbert S. Tew, Montreal, C. E., Cod Liver Oil; Chas. F. Bullen, Delaware, C. W., Clinical thesis, on cases of continued Fever, as observed in the Montreal General Hospital; Richard A. Kennedy, Montreal, C. E., Vesico-Vaginal Fistula; David Robertson, Milton, C. W., Ovarian Cystic Tumours; George Dice, Milton, C. W., Anæmia; Alex. A. Ferguson, Cornwall, C. W., Morbus Addisoni; Horace P. Redner, Belleville, C. W., Enteric Fever, as observed in the neighborhood of Belleville; John Dodd, Port Hope, C. W., Acute Rheumatism; William Kempt, Lindsay, C. W., Diphtheria; Peter A. McDougall, Aylmer, C. E., Traumatic Tetanus; Marcel Richard, St. Jaques, C. E., Smallpox; Charlemagne Dubuc, Montreal, C. E., Pathologie General des Secretions; John D. McCord, Montreal, C. E., Hydrocyanic Acid; Alex. R. Pinet, St. Laurent, C. E., de l'Hysteria; Mills Kemble Church, Merrickville, C. W., Scarlatina; Edward B. Gibson, Ottawa, C. W., Digitalis Purpurea; Kenneth Reid, Huntingdon, C. E., Chloroform; Montrose A. Patten, M.D., St. Louis, Missouri, U. S., The Ophthalmoscope and its Revelations; Sam. Pratt, Woodfull, Asst. Surgeon, Royal Artillery, Toronto, C. W., Paralysis.

The number of students who passed the primary examination, which includes anatomy, chemistry, materia medica, institutes of medicine, botany and zoology, was 31, as follows:

Messrs. John W. Blight, Quebec, C. E.; Kenneth Reid, Huntingdon, C. E; George C. Butler, Brystow, C. W.; John B. Christie, Oxford Mills, C. W.; Edward B. Gibson, Ottawa, C. W; Edward B. Hurd, Eaton, C. E.; Henry L. Vercoe, Fingall, C. W.; Prosper Bender, Quebec, C. E.; Mills K, Church, Merrickville, C. W; James Fitzgerald, Fenelon Falls, C. W.; Napoleon Mongenais, Rigaud, C. E.; James T. Halliday, Bowmanville, C. W.; Alfred Beaudet, Coteau du Lac, C. E.; Malcolm R. Meigs, Bedford, C. E.; Egerton R. Switzer, Earnestown, C. W.; John C. Jones, Prescott, C. W.; Stewart Creighton, Prescott, C. W.; Silas J. Bower, Kemptville, C. W.: Alex. R. Pinet, St. Laurent, C. E.; John W. McVean, Montague, C. W.; Chas. E. Graham, Ottawa, C. W.; Timothy Biglow, Whitby, C W.; Abraham C. Godfrey, Chicago, U. S.; Walter J. McInnes, Victoria, C. W.; Alfred Codd, Ottawa, C. W.; Richard T. Langrell, Ottawa, C. W.; Henry C. Rugg, Compton, C. E.; Hannibal W. Wood, Durham, C. E.; T. A. Dufort, St. Mark, C. E.; John Cassidy, Goderich, C. W.; George Sherk Walpole, C. W.

Prosper Bender; James A. Temple, and John R. Richardson, all of Quebec, C. E., passed their examinations for graduation, but not being of age, could not receive their degrees till next convocation.

Professor Scott, M.D., then addressed the graduates. The Professor observed that as they were about entering on the duties of their calling, he would give them a few parting words, the occasion being one of mingled pleasure and regret. After discussing the difficulties of a physician's career, and the motives which ought to actuate him, he observed they had all heard with delight of the liberal donation to the Faculty of Arts of three additional gold medals. He was, however, astonished that the Faculty of Medicine, which had been thirty-nine years in existence, and was the only one which was self-supporting, had been overlooked. He had no doubt, however, from the known liberality of the residents of Montreal, that at the next Convocation their esteemed Dean would have the pleasure of announcing the presentation of a gold medal to the Faculty of Medicine. He recommended that it should be founded in memory of Prof. Holmes, than whom no man lived more conscientiously, or died more beloved. He referred the matter to the ladies, who would thus furnish a strong incentive to professional excellence to students in the profession.

The valedictory address on behalf of the graduating class was read by Dr. Squire. He dwelt, in an eloquent manner, upon the fact of the members of the class meeting together for the last time, and that it behoved them to scan the future and recall the memories of the past. He then alluded to the motives which ought to actuate a student of medicine, as well as upon the duties of a true physician. After discussing various other topics in an interesting manner, he concluded with acknowledging the obligations of the students to their Professors.

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## COLLEGE OF PHYSICIANS AND SURGEONS, C.E.

The semi-annual meeting of the college for the purpose of examination was held on the 10th May. The following gentlemen having presented their diploma from McGill University, received the license of the college :—Messrs. R. A. Kennedy, M.D., David H. Hamson, M.D., Alex. Pinet, M.D., Charlemagne Dubuc, M.D., Marcel Richard, M.D., Charles H. Church, M.D., Angus McDonald, M.D., William W. Squire, M.D., Herbert S. Tew, M.D., Keneth R. Reid, M.D., J. S. Mason, M.D.

The following, after undergoing the usual examination on the various branches of medicine and surgery, were licensed to practice :—Horan French, Adelard Bazin, A. L. A. Laferrière, Fr. LaBelle, O. Dagenais, O. Bonin, Elijah Rowell, James Townley.

The following gentlemen were licensed as druggists and apothecaries: —Richard Tate, A. R. Davidson.

The following were admitted to the study of medicine after having passed a preliminary examination on the classics and general literature: —Henri Chaquette, Mederic Dorval, Henri Beliveau, Joseph S. Archambault, Joseph N. Dugaray, Rounald Fisit, Désiré Drainville, Edouard Badeaux, Amable Laferrière, Etienne Valcourt, Benj. Vigneau, Lectance Brodeur, Siméon Longtin, Isaac Gingras, Pierre Valois, Damase Olivier, Constant Henotte, Norman A. Smith, Hector Gaboury, J. Demers, Isaïe Sylvestre, Adolphe Garneau, Solfrid Larue.

And for the study of pharmacy:—Jules Robitaille, Jos. Levy.

We hear that the secretary received positive instructions to institute immediate legal proceedings against all unlicensed practitioners, a step much needed, as the city appears to be crowded with quacks.

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McGILL COLLEGE GRADUATES ABROAD.—We learn with great pleasure from our London cotemporaries, that Dr. Alexander Grant, of Ottawa, a graduate of McGill College of the class of 1854, has recently successfully passed the examinations, necessary for the following diplomas:—Licentiate Royal College of Surgeons, Edinburgh; Member Royal College of Physicians, London; Member Royal College of Surgeons, London. Dr. Blanchet, of Quebec, another graduate of McGill College, of the class 1863, also successfully passed his examination in January last, and was admitted a Member of the Royal College of Surgeons, London. On the 16th of March he underwent a still further examination before the same body, and received his diploma as a Licentiate in Midwifery.

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We send the first number of the *Canada Medical Journal* to every medical man whose address we have been able to obtain. We appeal to all who receive it, to aid us in the effort we are now making to establish a journal to be the organ of the profession generally. The amount of support which has already been promised by those who have heard of our intention, is very encouraging. We hope to deserve it by presenting a journal filled with original and selected matter of practical value to the physician and surgeon. Communications and books for review are to be addressed to the editors; business letters to be directed to the publishers. All communications must be prepaid.

*Obituary.*—We regret to have to announce the death of Dr. George M. Douglass, who for nearly twenty-eight years was Medical Superintendent of the Grosse Isle Quarantine Station. This melancholy event took place at Isle aux Noix, on the 1st of June.

There are a number of McGill College graduates serving as Surgeons in the Federal Army.

The number of children vaccinated, so far this year, by the Public Vaccinators of Montreal, is largely in excess of any year since their appointment.

It is in contemplation to build a detached building on the property of the Montreal General Hospital, to be used for Fever and Small-Pox cases.

Physicians in the country are informed that fresh Vaccine Lymph can always be had by directing to Dr. Francis W. Campbell, Montreal. Scabs $1 each.

The number of medical students in attendance during the past session at the Montreal School of Medicine was fifty-seven.

The Medical Council of Great Britain have decided to admit reporters to their meetings.

A peculiar skin disease was prevalent this spring in London. In some cases the eruption resembled roseola, in others lichen urticatus. The symptoms are red patches, especially on the face and extremities, mixed with pimples, itching and tingling, some headache, but no sore throat, and no catarrhal symptoms. The Medical *Times* says that many experienced practitioners have been puzzled to give a name off-hand to the eruption.

A little girl, twelve years of age of a very excitable disposition, living at Havre, having been scolded by her parents, went and purchased some vitriol and drank it off. She endured great suffering, but died in six hours.

There has been no examination for the Indian Medical Service for three years.

The British Pharmacopœia is being severely criticised.

Dr. T. K. Chambers of St. Mary's Hospital, London, has had his leg amputated by Mr. Paget. It appears that he was suffering from poplitual aneurism for exactly ten days; on the 11th day it burst, and in spite of compression, kept upon the artery, by a relay of Medical students, the leg became filled with extravasated blood; it was amputated at six p.m. the same day.

## MORTALITY OF THE CITY OF MONTREAL IN JANUARY 1864.

*Compiled, from the Cemetery Returns, by G. E. Fenwick, M.D.*

MOUNT ROYAL CEMETERY.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Lous. | St. James. | St. Mary. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 2 | 2 | 4 | 4 | | | | | | | | | | | | | | | | 1 | 3 | | | 1 | | 1 | 4 | |
| Infantile Debility | 2 | 1 | 3 | | 3 | | | | | | | | | | | | | | | | | 1 | | 1 | | | 3 | |
| Senile Debility | | 2 | 2 | | | | | | | | | | | | | | | | | | | 1 | | 1 | | | | 2 |
| Small Pox | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measles | 1 | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | 1 | | 1 | |
| Scarlatina | 2 | 2 | 4 | | | 4 | | | | | | | | | | | | | | 1 | | 3 | | | | | 2 | 2 |
| Fever | 1 | | 1 | | 1 | | | | | | | | | | | | | | | | | | 1 | | | | | 1 |
| Inflammation of Brain | 6 | 2 | 8 | | 6 | | | | | 1 | | 1 | | | | | | | | 1 | 2 | 2 | 2 | 1 | | | 4 | 4 |
| Apoplexy | 2 | | 2 | | | | 1 | | 1 | | | | | | | | | | | | | | 1 | | 1 | | 2 | |
| Paralysis | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Croup | 1 | | 1 | | | 1 | | | | | | | | | | | | | | | 1 | | | | | | 1 | |
| Hooping Cough | 1 | | 1 | | 1 | | | | | | | | | | | | | | | | | 1 | | | | | 1 | |
| Inflammation of Lungs | 6 | 1 | 7 | | 4 | | | | 1 | 1 | | 1 | | | | | | | | | 3 | 2 | 2 | | | | 4 | 3 |
| Consumption | 6 | 2 | 8 | | 1 | | | 2 | 3 | 1 | | 1 | | | | | | | | | 4 | 3 | 1 | | | | 3 | 5 |
| Disease of Heart | 1 | | 1 | | | | | | 1 | | | | | | | | | | | | | | | 1 | | | | 1 |
| Dentition | 1 | 1 | 2 | | 2 | | | | | | | | | | | | | | | | | 1 | 1 | | | | 1 | 1 |
| Inflam. of Bowels | 2 | 1 | 3 | | 1 | | | | | 1 | | 1 | | | | | | | | 1 | 1 | 1 | | | | | 1 | 2 |
| Disease of Liver | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflam. of Uterus | | 1 | 1 | | | | | | 1 | | | | | | | | | | | | | | | 1 | | | | 1 |
| Childbirth | | 1 | 1 | | | | | | | 1 | | | | | | | | | | | | | | | 1 | | | 1 |
| Disease of Knee Joint | | 1 | 1 | | | | | | 1 | | | | | | | | | | | | | | | 1 | | | | 1 |
| Cancer | 1 | | 1 | | | | | | 1 | | | | | | | | | | | | | 1 | | | | | | 1 |
| Killed | 1 | 1 | 2 | | 1 | | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | 1 | 1 |
| Total | 36 | 18 | 54 | 4 | 21 | 5 | 2 | 2 | 9 | 5 | | 4 | 2 | | | | | | | 3 | 14 | 16 | 9 | 4 | 4 | 2 | 28 | 26 |

ROMAN CATHOLIC CEMETERY.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | 2 to 10 years. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Sœurs Grises. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 4 | 5 | 9 | 9 | | | | | | | | | | | | | | | | 1 | 2 | 1 | 1 | 1 | | | 1 | 9 | |
| Senile Debility | 5 | 4 | 9 | | | | | | | | | | | | | | | | | | 1 | 5 | 1 | | | | 2 | 6 | 3 |
| Infant. Debility | 66 | 52 | 118 | | 118 | | | | | | | | | | | | 1 | | | 15 | 12 | 31 | 15 | 10 | 11 | 47 | 4 | 104 | 14 |
| Small Pox | 6 | 4 | 10 | | | 3 | 7 | | | | | | | | | | | | | | | 2 | 8 | | | | | 8 | 2 |
| Measles | 2 | 3 | 5 | | | 1 | 4 | | | | | | | | | | | | | 1 | 1 | | 1 | 1 | | | | 5 | 0 |
| Scatlet Fever | 27 | 31 | 58 | | | 8 | 50 | | | | | | | | | | | | | 1 | 12 | 4 | 4 | 5 | 16 | 12 | 4 | 49 | 9 |
| Fever | 2 | 8 | 10 | | | | 3 | | 4 | 1 | | 2 | | | | | | | | | | 1 | 1 | 2 | 3 | 1 | 2 | 9 | 1 |
| Inflam. Brain | 2 | 2 | 4 | | 1 | | 3 | | | | | | | | | | | | | | | 2 | | 1 | | | | 3 | 1 |
| Delirium Trem | | 1 | 1 | | | | | 1 | | | | | | | | | | | | | | | | | 1 | | | | 1 |
| Apoplexy | 2 | | 2 | | | | | | 1 | | 1 | | | | | | | | | | | 1 | | 1 | | | 2 | | 2 |
| Paralysis | | 2 | 2 | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | 2 | | |
| Croup | 11 | 3 | 14 | | | | 14 | | | | | | | | | | | | | 4 | 1 | | | 4 | 1 | | 2 | 14 | |
| Hoop'g Cough | 3 | 2 | 5 | | 3 | 2 | | | | | | | | | | | | | | 1 | 1 | | 1 | 2 | | | | 4 | 1 |
| Inflam. Lungs | 3 | 7 | 10 | | | 4 | | 2 | | 2 | 2 | | | | | | | | | | 2 | 2 | 3 | 1 | 2 | | | 8 | 2 |
| Consumption | 5 | 5 | 10 | | | | 3 | 1 | 3 | 2 | 1 | | | | | | | | | | 1 | 4 | | 2 | 2 | | 1 | 6 | 4 |
| Disease Heart | | 1 | 1 | | | | | 1 | | | | | | | | | | | | | | | | | | | 1 | | |
| Dentition | 5 | 6 | 11 | | 11 | | | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 2 | 4 | | 1 | 10 | 1 |
| Inflam. Bowels | | 1 | 1 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | 1 | |
| Disease Liver | | 1 | 1 | | | | | | 1 | | | | | | | | | | | | | 1 | | | | | | 1 | |
| Dropsy | 5 | 4 | 9 | | | | | 2 | | 2 | 3 | | 1 | | | | | | | | 2 | 4 | | 2 | | | 1 | 8 | 1 |
| Childbirth | | 1 | 1 | | | | | | 1 | | | | | | | | | | | | | | | 1 | | | | 1 | |
| Rheumatism | | 2 | 2 | | | | | | | 2 | | | | | | | | | | | 1 | 1 | | | | | | 2 | |
| Cancer | | 3 | 3 | | | | | | 2 | 1 | | | | | | | | | | | 1 | 2 | | | | | | 2 | 1 |
| Abscess | 1 | 1 | 2 | | | 1 | | | | | | 1 | | | | | | | | | | | | | | | 1 | 2 | |
| Accidental | 2 | | 2 | | | 1 | | | | | | 1 | | | | | | | | 1 | | 1 | | | | | | 2 | |
| Total | 151 | 149 | 300 | 9 | 145 | 89 | 3 | 8 | 10 | 8 | 9 | 10 | 3 | 5 | 1 | | 2 | | 2 | 36 | 34 | 35 | 41 | 46 | 35 | 47 | 22 | 257 | 43 |

## MORTALITY OF THE CITY OF MONTREAL IN FEBRUARY 1864.

*Compiled, from the Cemetery Returns, by G. E. Fenwick, M.D.*

### Mount Royal Cemetery.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 2 | 2 | 4 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | 1 | 4 | .. |
| Senile Debility | 2 | 2 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | .. | 1 | .. | 4 |
| Infantile Debility | 3 | 1 | 4 | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | 1 | .. | .. | .. | 4 | .. |
| Small Pox | 5 | .. | 5 | .. | 1 | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 3 | .. | .. | .. | 3 | 2 |
| Scarlet Fever | 6 | 7 | 13 | .. | 4 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 3 | .. | 4 | 1 | .. | 1 | 9 | 4 |
| Fever | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. |
| Inflammation of Brain | .. | 4 | 4 | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | 2 | 4 | .. |
| Apoplexy | .. | 2 | 2 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 |
| Paralysis | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Croup | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Hooping Cough | 1 | 1 | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 1 | .. | .. | .. | 2 | .. |
| Diphtheria | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. |
| Inflammation of Lungs | 5 | 3 | 8 | .. | 5 | 2 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | 2 | 2 | .. | 2 | .. | 1 | .. | 7 | 1 |
| Consumption | 4 | 2 | 6 | .. | .. | .. | 1 | 2 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 2 | .. | .. | 2 | 3 | 3 |
| Disease of Heart | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| Dentition | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. |
| Inflam. of Bowels | 1 | 1 | 2 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| Diarrhœa | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Dropsy | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 2 |
| Erysipelas | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Charbon | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cancer | .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 |
| Childbirth | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| Accidental | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | 33 | 29 | 62 | 4 | 22 | 12 | 1 | 6 | 6 | 4 | 1 | 1 | 3 | 2 | .. | .. | 1 | 1 | 2 | 15 | 9 | 7 | 15 | 2 | 1 | 9 | 39 | 23 |

### Roman Catholic Cemetery.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Sœurs Grises. | Not of Montreal. | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 4 | 4 | 8 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | 1 | 1 | 2 | .. | 1 | 8 | .. |
| Senile Debility | 2 | 3 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 1 | .. | .. | .. | .. | .. | 2 | 2 | 2 | .. | .. | 1 | .. | 5 | .. |
| Infant. Debility | 46 | 30 | 76 | .. | 76 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 10 | 7 | 4 | 2 | 7 | 9 | 30 | 5 | 67 | 9 |
| Small Pox | 4 | 8 | 12 | .. | 6 | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 1 | 6 | .. | 1 | .. | .. | 12 | .. |
| Scarlet Fever | 52 | 59 | 111 | .. | 26 | 81 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 26 | 18 | 6 | 9 | 19 | 20 | .. | 11 | *82 | 29 |
| Fever | 1 | 2 | 3 | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | 3 | .. |
| Inflam. Brain | 3 | 1 | 4 | .. | 1 | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | .. | .. | .. | .. | .. | 4 | .. |
| Apoplexy | 4 | 2 | 6 | .. | .. | .. | .. | .. | .. | .. | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 4 | .. | 1 | .. | .. | .. | .. | 4 | 2 |
| Paralysis | 2 | 2 | 4 | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | .. | .. | .. | 1 | 4 | .. |
| Croup | 8 | 1 | 9 | .. | 4 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 1 | 1 | 1 | .. | .. | 3 | 8 | 1 |
| Hoop'g Cough | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Inflam. Lungs | 5 | 2 | 7 | .. | .. | .. | 1 | 1 | .. | 2 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | 1 | 1 | .. | .. | 1 | 4 | 3 |
| Consumption | 10 | 6 | 16 | .. | .. | 2 | 1 | 5 | 2 | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 3 | 5 | 3 | 2 | .. | .. | 14 | 2 |
| Disease Heart | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Asthma | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Dentition | 1 | 3 | 4 | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 1 | 1 | .. | .. | 4 | .. |
| Inflam. Bowels | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Disease Liver | 2 | .. | 2 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. |
| Dropsy | 1 | 5 | 6 | .. | .. | .. | .. | .. | 1 | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | .. | 1 | .. | 1 | 4 | 2 |
| Erysipelas | 1 | 1 | 2 | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 2 | .. |
| Childbirth | .. | 8 | 8 | .. | .. | .. | 4 | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 3 | 1 | .. | 1 | 4 | 4 |
| Abscess | 1 | 1 | 2 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | .. | 2 | .. |
| Cancer | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| After Surg. Op. | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| Accidental | 4 | .. | 4 | .. | 1 | 1 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | 1 | .. | .. | .. | .. | 1 | 3 |
| Total | 151 | 141 | 292 | 8 | 118 | 97 | 9 | 13 | 6 | 13 | 11 | 9 | 7 | 1 | .. | .. | 6 | .. | 1 | 50 | 44 | 23 | 33 | 40 | 40 | 31 | 24 | 237 | 55 |

# ABSTRACT OF METEOROLOGICAL OBSERVATIONS,

*Taken at the Montreal Observatory, Latitude 45° 31′ N. Longitude 4h. 54m. 11s. W. of Greenwich. Height above level of the Sea 182 feet. For the month of January 1864.*

BY CHARLES SMALLWOOD, M.D., LL.D.

| Day of Month. | Reading of the Barometer, corrected, and reduced to 32° F. | | | Reading of Thermometer. | | | Mean Tension of Vapor. | Mean Humidity of the Atmosphere. | General direction of Wind. | Horizontal movement in 24 hours in miles. | Mean extent of Clouds in 10ths. | Depth of Rain in inches. | Depth of Snow in inches. | Ozone in 10ths. | Weather, &c. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Highest | Lowest. | Mean. | Max. | Min. | Mean | | | | | | | | | |
| | Inches. | Inches. | Inches. | | | | | | | | | | | | |
| 1 | 29.133 | 29.414 | 29.242 | 35.0 | 13.4 | 27.2 | .160 | .898 | S W | 87.82 | 6.3 | Inapp | .... | 2.6 | Rain. |
| 2 | .900 | .636 | .766 | 8.0 | -9.1 | 0.5 | .044 | .843 | W | 440.40 | 2.0 | Inapp | .... | 1.3 | Rain. |
| 3 | .898 | .859 | .872 | 18.9 | -2.0 | 11.7 | .079 | .846 | S W | 4b5.90 | 1.3 | .... | Inapp | 2.0 | Snow. |
| 4 | 30.100 | .888 | 30.019 | 19.4 | 0.0 | 10 6 | .076 | .846 | S W | 200.00 | 1.6 | .... | .... | 1.6 | Aurora Bor. |
| 5 | 29.834 | .700 | 29.772 | 10.0 | -2.0 | 6.7 | .067 | .871 | N E | 34.40 | 6.6 | .... | 2.20 | 2.6 | Snow. |
| 6 | 30.149 | .898 | 30 074 | 6.2 | 0 0 | 5.4 | .057 | .895 | S W | 72.10 | 6.3 | .... | Inapp | 2.0 | Snow. |
| 7 | .330 | 30.110 | .237 | 9.6 | -16.9 | -0.8 | .044 | .863 | W | 57.66 | 2.6 | .... | .... | 1.3 | |
| 8 | 29.800 | 29.790 | 29.844 | 24.2 | 5.0 | 15.7 | .192 | .883 | S W | 24.70 | 10.0 | .... | .... | 2.6 | |
| 9 | .760 | .541 | .640 | 23.7 | 11.4 | 17.5 | .100 | .844 | S W | 56.52 | 6.6 | .... | Inapp | 3.0 | Snow. |
| 10 | .614 | .600 | .605 | 25.3 | 18.9 | 23.2 | .127 | .877 | S W | 299.44 | 10.0 | .... | .... | 2.6 | |
| 11 | .604 | .499 | .554 | 27.1 | 18.1 | 23.2 | .146 | .889 | S W | 104.06 | 6.6 | .... | 1 20 | 2.6 | Snow. |
| 12 | .648 | .462 | .559 | 29.6 | 16.4 | 24.4 | .137 | .902 | N E | 60.90 | 10 0 | .... | .... | 3.0 | |
| 13 | .600 | .433 | .511 | 37.8 | 29°4 | 34°1 | .205 | .944 | S W | 77.30 | 10.0 | .... | .... | 3.0 | |
| 14 | .900 | .681 | .801 | 34.9 | 23.2 | 27·6 | .152 | .869 | S W | 34.50 | 4.0 | .... | .... | 6.6 | |
| 15 | .709 | .572 | .627 | 36.6 | 13.1 | 26.6 | .147 | .889 | N E | 96.50 | 10.0 | .... | 3.20 | 4.6 | Snow. |
| 16 | 30.098 | .837 | .977 | 25.2 | 4.0 | 15.4 | .086 | .837 | W | 130.57 | 4.0 | .... | 0.20 | 1.3 | Snow. |
| 17 | .040 | .971 | 30.037 | 32.2 | 21.0 | 28.3 | .165 | .920 | S W | 54.00 | 4.6 | .... | .... | 2.6 | |
| 18 | 29.998 | .962 | 29.975 | 37.8 | 27.4 | 34.4 | .188 | .912 | S W | 202.80 | 10.0 | .... | 3.10 | 4.0 | Snow. |
| 19 | .879 | .211 | .520 | 26.7 | 24.0 | 25.9 | .151 | .936 | N E | 38.20 | 10.0 | .... | 4.10 | 5.0 | Snow. |
| 20 | 30.094 | .519 | .791 | 28.0 | 18.1 | 22.1 | .119 | .849 | W | 239.12 | 9.3 | .... | 2.05 | 2.6 | Snow. |
| 21 | .255 | 30.200 | 30.234 | 32.2 | 3.8 | 16.6 | .105 | .860 | W | 174.38 | 0.0 | .... | .... | 2.3 | |
| 22 | 29.875 | 29.855 | 29.864 | 34.1 | 17.4 | 28.8 | .169 | .929 | S W | 45.19 | 6.6 | Inapp | Inapp | 2.6 | Snow. Rain. |
| 23 | .845 | .525 | .723 | 35.2 | 21.2 | 30.9 | .178 | .919 | W S W | 124.10 | 7.6 | Inapp | 1.10 | 3.3 | Snow. |
| 24 | .482 | .298 | .383 | 40.1 | 30.1 | 38.7 | .231 | .924 | S W | 28.14 | 10.0 | 0.100 | .... | 4.6 | Rain. |
| 25 | .533 | .329 | .424 | 47.1 | 30.1 | 36.8 | .217 | .902 | W | 58.13 | 6.6 | .... | .... | 2.6 | |
| 26 | .781 | .325 | .602 | 38.7 | 17.3 | 27.7 | .153 | .867 | N E | 112.72 | 3.3 | .... | 5.60 | 3.3 | Snow. |
| 27 | .877 | .568 | .728 | 28.1 | 15.0 | 23.6 | .131 | .882 | N E | 146.04 | 10.0 | .... | Inapp | 3.0 | Snow. |
| 28 | .924 | .829 | .904 | 42.0 | 22.1 | 33.3 | .180 | .833 | S W | 91.68 | 10.0 | .... | .... | 3.0 | |
| 29 | 30.300 | 30.177 | 30.253 | 25.1 | 15.8 | 19.8 | .198 | .794 | N E | 115.48 | 7.0 | .... | .... | 2.6 | |
| 30 | .314 | .150 | .221 | 19.0 | 11.5 | 16.3 | .091 | .811 | N E | 146.70 | 10.0 | .... | 8.19 | 4.0 | Snow. |
| 31 | .284 | .148 | .247 | 24.1 | 18.9 | 20.2 | .106 | .820 | N E | 243.80 | 6·6 | .... | 2.00 | 2.6 | Snow. |

Remarks for the Month.

Barometer.... { Highest, the 30th day, 30.314 inches.
Lowest, the 19th day, 29.211 "
Monthly Mean, 29.937 "
Monthly Range, 1.103 "

Thermometer { Highest, the 25th day, 47°1
Lowest, the 7th day, -16°9.
Monthly Mean, 21°52.
Monthly Range. 64°0.

Greatest intensity of the Sun's rays, 64°7.
Lowest point of Terrestrial radiation, -18°4.
Mean of Humidity, ·857.
Rain fell on 5 days amounting to 0.100 inches.
Snow fell on 16 days amounting to 32·85 inches.
Most prevalent wind, S. W.
Least prevalent wind, W.
Most windy day the 3rd day, mean miles per hour, 20.24.
Least windy day the 8th day, mean miles per hour, 1.02.
Aurora Borealis visible 1 night.
Zodiacal light, bright.
Imperfect Solar Halo, 20th day.

# ABSTRACT OF METEOROLOGICAL OBSERVATIONS,

*Taken at the Montreal Observatory, Latitude 45° 31′ N. Longitude 4h. 54m. 11s. W. of Greenwich. Height above the level of the Sea 182 feet. For the month of February, 1864.*

BY CHARLES SMALLWOOD, M.D., LL.D.

| Day of Month. | Reading of the Barometer, corrected, and reduced to 32° F. | | | Reading of Thermometer. | | | Mean Tension of Vapor. | Mean Humidity of the Atmosphere. | General direction of Wind. | Horizontal movement in 24 hours in miles. | Mean extent of Clouds in 10ths. | Depth of Rain in inches. | Depth of Snow in inches. | Ozone in 10ths. | Weather, &c. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Highest | Lowest. | Mean. | Max. | Min. | Mean | | | | | | | | | |
| | Inches. | Inches. | Inches. | | | | | | | | | | | | |
| 1 | 29.986 | 29.643 | 29.809 | 26.1 | 2.5 | 24.2 | .133 | .893 | S W | 454.00 | 10.0 | .... | 13.6 | 5.0 | Snow. |
| 2 | .650 | .450 | .607 | 39.8 | 29.0 | 34.7 | .199 | .911 | S W | 423.60 | 10.0 | Inapp | 0.3 | 5.0 | Snow. |
| 3 | .511 | .424 | .472 | 40.0 | 29.2 | 32.3 | .178 | .832 | NE by E | 23.80 | 10.0 | Inapp | 0.50 | 4.0 | Rain—Snow. |
| 4 | .581 | .495 | .525 | 38.4 | 20.4 | 30.7 | .165 | .883 | NE by E | 46.36 | 8.0 | Inapp | Inapp | 5.0 | Rain—Snow. |
| 5 | .632 | .431 | .535 | 36.3 | 4.2 | 33.8 | .186 | .882 | S W | 102.97 | 10.0 | 0.30 | Inapp | 4.3 | Rain—Snow. |
| 6 | .690 | .673 | .681 | 37.2 | 25.2 | 33.1 | .175 | .834 | W S W | 37.77 | 9.3 | .... | 0.30 | 2.0 | Snow. |
| 7 | .571 | .430 | .477 | 35.4 | 23.0 | 32.2 | .176 | .887 | S W | 300.50 | 10.0 | .... | .... | 4.0 | |
| 8 | .472 | .201 | .318 | 43.2 | 26.0 | 34.6 | .169 | .854 | S W | 588.00 | 6.6 | .... | 0.40 | 3.3 | Snow. |
| 9 | .816 | .604 | .739 | 27.0 | 7.4 | 16.6 | .098 | .847 | W | 175.59 | 1.3 | .... | 0.40 | 2.0 | Snow. |
| 10 | 30.155 | .924 | 30.028 | 15 3 | -8.9 | 3.0 | .055 | .844 | N W | 112.20 | 1.3 | .... | .... | 1.0 | |
| 11 | .146 | .570 | 29.886 | 22.0 | -4.7 | 12.2 | .037 | .851 | S W | 221.41 | 7.6 | .... | 1.00 | 3.3 | Snow. |
| 12 | 29.581 | .478 | .522 | 41.1 | 18.4 | 28.6 | .162 | .879 | W | 190.99 | 4.0 | .... | 2.40 | 3.6 | Snow. |
| 13 | .489 | .354 | .414 | 38.8 | 25.1 | 33.4 | .184 | .877 | S W | 154.37 | 10.0 | .... | Inapp | 3.0 | Snow. |
| 14 | .728 | .375 | .501 | 27.9 | 14.0 | 22.0 | .132 | .885 | N E | 195.24 | 6.6 | .... | .... | 3.6 | |
| 15 | 30.010 | .550 | .823 | 7.1 | -10.1 | 0.5 | .065 | .899 | N | 145.24 | 4.6 | .... | 5.25 | 2.6 | Snow. |
| 16 | 29.262 | .078 | .154 | 20.0 | 6.8 | 14.2 | .089 | .884 | N E | 81.56 | 8.6 | .... | 4.10 | 2.6 | Snow. |
| 17 | .901 | .324 | .377 | -6.3 | -19.4 | -12.5 | .033 | .824 | W | 128.50 | 5.3 | .... | 0.50 | 2.0 | Snow. |
| 18 | 30.221 | 30.161 | 30.194 | 13.9 | -20.4 | -3.1 | .042 | .809 | W S W | 168.96 | 6.0 | .... | .... | 2.0 | |
| 19 | .256 | .025 | .161 | 22.0 | -12.0 | 8.1 | .078 | .824 | W by S | 73.43 | 2.6 | .... | .... | 2.6 | |
| 20 | 29.971 | 29.891 | 29.947 | 37.3 | 10.0 | 24.4 | .138 | .876 | W by S | 156.60 | 6.0 | .... | Inapp | 2.6 | Snow. |
| 21 | .900 | .898 | .900 | 37.4 | 29.2 | 33.1 | .178 | .862 | W by S | 108.00 | 8.6 | .... | .... | 2.3 | |
| 22 | .861 | .459 | .699 | 40.8 | 29.2 | 36.8 | .207 | .880 | S W | 152.91 | 10.0 | Inapp | .... | 3.6 | Rain. |
| 23 | .600 | .472 | .525 | 48.9 | 33.1 | 41.3 | .236 | .858 | W S W | 277.96 | 6.0 | 0.380 | .... | 3.3 | Rain. |
| 24 | .500 | .344 | .432 | 58.2 | 34.6 | 45.5 | .291 | .874 | S W | 100.28 | 8.0 | .... | .... | 3.3 | |
| 25 | .731 | .626 | .693 | 42.2 | 28.4 | 32.6 | .174 | .845 | NE by E | 66.79 | 3.6 | .... | .... | 2.3 | |
| 26 | .762 | .711 | .748 | 36.1 | 14.5 | 28.3 | .151 | .847 | N N W | 207.39 | 2.0 | .... | .... | 2.3 | |
| 27 | .882 | .863 | .873 | 42.3 | 11.2 | 28.7 | .163 | .860 | W | 125.47 | 0.0 | .... | .... | 2.0 | |
| 28 | .642 | .599 | .624 | 38.9 | 33.4 | 37.1 | .196 | .809 | S W | 234.33 | 10.0 | .... | .... | 2.6 | |
| 29 | .998 | .599 | .826 | 40.2 | 26.4 | 31.5 | .167 | .897 | S W | 95.32 | 3.3 | 0.110 | .... | 2.6 | Rain. |

Remarks for the Month.

Barometer.... Highest, the 19th day, 30.256 inches.
Lowest, the 16th day, 29.078 "
Monthly Mean, 29.929 "
Monthly Rang, 1.178 "

Thermometer Highest, the 24th day, 58°2.
Lowest, the 18th day, -20°4.
Monthly Mean, 25°32.
Monthly Range, 78°6.

Greatest intensity of the Sun's rays, 74°0.
Lowest point of Terrestrial radiation, -22°7.
Mean Humidity ·865.
Rain fell on 7 days amounting to 0.790 inches.
Snow fell on 15 days amounting to 28.75 inches.
Most prevalent wind, S. W.
Least prevalent wind, N. W.
Most windy day the 8th day, mean miles per hour, 24.50.
Least windy day the 3rd day, mean miles per hour, 1.40.
Zodiacal light, bright.

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*On Testing for Strychnine.* By G. P. GIRDWOOD, Esq., M.R.C.S.L., Asst. Surgeon 1st Battalion Grenadier Guards.

The numerous cases of accidental or intentional poisoning with this deadly agent, the facility with which it is obtained, and the constant practice of using it for the destruction of vermin, by which accidents so frequently occur, and the various legal questions arising from its use, render the detection of strychnine a matter of great importance. The distinctive tests for the presence of strychnine, when pure, are simple and strongly characteristic. If the suspected matter be placed on a piece of white porcelain, moistened with a drop of strong sulphuric acid, and a small crystal of bichromate of potash added and moved about, it leaves in its track a beautiful purple color, by which the presence of strychnine may at once be recognized. This color may be produced in a variety of ways with strychnine; sulphuric acid and peroxide of lead, or manganese will give it. Strychnine moistened with sulphuric acid on a small piece of platina foil and a galvanic current passed through it, as suggested by Dr. Letheby, will also produce the same color. With strong nitric acid, strychnine, if pure, produces no change, but it usually gives a fine red color, which changes quickly to yellow, owing to the presence of a small quantity of brucine.

The sulphuric acid and bichromate of potash, and the sulphuric acid and galvanic current, are the two tests most to be relied upon, and are certain and easy of application. To apply these tests with efficacy, the strychnine must be in an isolated condition: it is seldom that the medical man is called upon to test it in this state. He is usually required to decide if it has been the agent that has destroyed life, and he has to seek it in some organic matter, such as the body of the

deceased, or in some mixture in which it has been administered. In these cases it is first necessary to separate the strychnine, and obtain it in such a form as will enable the analyst to apply his tests without chance of error. The sulphuric acid and bichromate test is capable of detecting so small a quantity as the $\frac{1}{80000}$th of a grain, when freed from other matter. At the trial of Palmer in England in the year 1856, it was stated that strychnine could not be detected in the body after death. In conjunction with Mr. Rodgers, of London, I at that time made a large series of experiments, the results of which we published in the London *Lancet*. In the course of these experiments we arrived at the following as the best mode of separating strychnine from organic matters: The substance is to be cut into small pieces, covered with distilled water, and acidulated with one-sixth the quantity of pure hydrochloric acid, and heated over a water bath until the tissues are completely disintegrated; this is now to be filtered, and the filtrate neutralized with excess of ammonia. If there be any deposit it should be filtered again. The filtrate is now agitated for some minutes with a small quantity of chloroform in a long glass tube, and allowed to settle. When the chloroform is separated from the liquid, it is to be drawn off with a pipette, and transferred to an evaporating basin, and the chloroform expelled on a water bath. The residue is then moistened with concentrated sulphuric acid, and kept on a water bath for an hour. It is then diluted with water, filtered, the acid neutralized with excess of ammonia and again agitated with chloroform: the chloroform drawn off as before. This will generally yield the strychnine in a sufficiently pure state for testing. If now a small quantity of the chloroform be evaporated to dryness on a small piece of white porcelain, and moistened with strong sulphuric acid, and no change takes place, a minute crystal of bichromate of potash may be drawn across the spot, and if strychnine be present the characteristic purple color will immediately be seen, but if the sulphuric acid be discolored, it must be put back with the remaining chloroform, and the whole agitated with a portion of diluted sulphuric acid, which will extract the strychnine from the chloroform, leaving behind some fatty matters that may have been taken up by the chloroform. The acid solution is carefully separated from the chloroform, again neutralised with excess of ammonia, and agitated with a fresh portion of chloroform. This chloroform will now yield the whole of the strychnine pure, and may be tested as before with sulphuric acid and bichromate of potash, or any of the other tests for strychnine.

This process is founded, firstly, on the fact that strychnine resists the action of concentrated sulphuric acid at a temperature of 212°; and,

secondly, that chloroform will extract strychnine from an alkaline solution, but not from an acid one.

In the course of the experiments which were carried on by Mr. Rodgers and myself, we detected strychnine in the stomach, tissues, and even in the bones and urine of a rabbit which was poisoned with five doses of strychnine, one-thirtieth of a grain in each dose, administered at intervals of fifteen minutes. It was also easily detected in the remains of a dog that had been buried twelve months, and the tissues converted into adipocere. In this case it was also detected in the bones, scraped free from other matter.

The fact that strychnine is capable of resisting the putrefactive and fermentative processes, and the action of strong sulphuric acid, indicates that it may be detected, long after burial, in cases where it has been the cause of death.

Strychnine has frequently been detected in the urine of patients when taken in medicinal doses. When looking for strychnine in the urine or in the bones, it is well to take advantage of the phosphoric acid contained in them, and precipitate it as triple phosphate by the addition of sulphate of magnesia and excess of ammonia, whereby a copious deposit of sulphate of lime is thrown down, and also of triple phosphate, both of which materially assist in the examination by carrying down with them a large quantity of organic matter, leaving a clear solution more easy of subsequent manipulation.

Ammonia will throw down strychnine, and it may be said that strychnine should be looked for in the precipitate produced by that re-agent. This would be true if a large quantity of strychnine were present; but in the analysis for strychnine in cases of poisoning, especially in the tissues, only a very small quantity must be expected, and strychnine is soluble in 7000 parts of cold water; hence a filtrate of a pint, which is a usual quantity, would hold in solution, although alkaline with ammonia, a grain and a half of strychnine, which would be lost if looked for in the precipitate, and would be ample to destroy life.

Montreal, July, 1864.

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*Case of Filiaria Medinensis Dracunculus, or Guinea Worm.* By FREDERICK ROBINSON, M.D., M.R.C.P., London, Surgeon, Scots Fusilier Guards.

The subject of this notice served with his regiment in India during the mutiny of 1857. On one occasion, while stationed in a fort which was besieged by the rebels for a period of sixty days, the garrison were

forced to drink water from a stagnant pool. The water was covered with decomposing vegetable matter, and was so foul that before using it, it had to be strained and boiled; it was further purified by the addition of some saline preparation.

No ill results were experienced by him at the time; but he states that two of his comrades were afflicted in their feet with the worm, and were under treatment several months subsequent to the siege; and furthermore, that while on their passage home, an officer of the Indian Service died on board the ship, from the effects of this disease. Dysentery, and other bowel affections, were prevalent at the time among the soldiers.

Samuel Smith, æt. 31, a healthy young man, thirteen years a soldier, seven of which he served in India, was admitted into hospital April 6, 1862, suffering from a small swelling resembling somewhat a boil, situated between the inner maleolus of left ankle and tendo achillis; there was considerable constitutional disturbance, and on the second night after admission the skin gave way, and the end of a Guinea worm made its appearance. To use his own words, he "catched hold of it, and it slipped in again." The following morning the worm again appeared, when the orderly very injudiciously attempted to pull it out, and it broke. This was followed by considerable pain of a burning character and increased fever. He said he felt the worm moving beneath the skin. It appeared to burrow beneath the integument, which became erysipelatous, completely encircling the ankle; abscesses formed at various points, necessitating several incisions; but at length the worm was entirely expelled; the wound healed kindly, and the man was discharged cured. The treatment throughout consisted of aperients, opiates, generous diet, and the local application of linseed poultice. The worm is in two pieces, each measuring about six inches, giving an entire length of somewhat over a foot. The color is white, and it is in size about that of a fine fiddle-string. Both extremities are blunt; no distinct head is observable. It was probably destroyed in the first effort at extraction.

On microscopic examination the body of the parasite was found to contain innumerable young, presenting the usual characteristic appearance, a very correct illustration of which is to be found in the second volume of Dr. Aiken's valuable treatise on the Science and Practice of Medicine.

Toward the end of the case the worm was discharged in very many small pieces adhering to the surface of the poultice, and resembling small shreds of lymph. A point of considerable interest is the length of time which elapsed from when it is presumed the ovum was deposited, to the

period of its expulsion. The man never suffered any inconvenience in the interim, and formed one of the battalion of Guards who travelled over land to Canada from Halifax, after the "Trent" difficulty.

He returned from India in September, 1860, and continued to do duty up to the period of his admission into hospital on the 6th April, 1862.

The Guinea worm is found chiefly in Africa; it has been observed also in Arabia-Petræa, the shores of the Persian Gulf, Caspian Sea, River Ganges, Upper Egypt, and Abyssinia. It seems to have been known to the Arabians and Greeks, the latter of whom, according to Pliny, termed it δραχοντια, whence the name dracunculus. Lœfler, who resided in Africa many years, states that he never found either the worm itself nor its ova in the waters of that country. And Hind, after frequent examinations of the waters of countries where the worm has been observed, declares that he failed in finding the worm or its ova. It is believed by many to be alone developed in the human body, though Rayer, in his work on diseases of the skin, says, "The *filiaria* inhabits the cellular tissue of animals of all classes." According to Sir James McGregor, and other observers, it is almost invariably found in the lower extremities, chiefly in the feet. Of 181 cases collected by Sir James, two only occurred in the hands. As to its solitary habit there is a difference of opinion, some asserting that it is invariably found singly, while others assert that it is not uncommon to meet with several worms in the same patient at the same time.

There is, however, no doubt at the present day on this point. Abundance of evidence is forthcoming, proving the existence of many worms in the same individual at the same time. In the Transactions of the Hydrabad Medical and Philosophical Society, Dr. Minas, of Sirsa, mentions the case of a native, in whom death resulted, and on examination the skin was found an entire network of Guinea worms. Dubois has seen as many as seven taken out at once from the same leg; and Mr. Forbes has seen six or seven extracted from the same patient: at the time he wrote, he was treating a patient in hospital, in whom no less than fifteen worms were exposed and in course of extraction. Drs. Grierson and Lorimer bear similar testimony; and Dr. A. Farre mentions the case of a native, in whom fifty worms existed at the same time.

All writers seem agreed as to its physical characters, but with regard to length, accounts vary from a few inches to several feet. Its size is characteristic, being usually that of a small fiddle-string; the specimen above described resembles a piece of catgut.

Montreal, July, 1864.

*Case of Malignant Pustule occurring in the Montreal General Hospital.*
By J. M. DRAKE, M.D., House Surgeon.

William Little, aged 52, and a native of England, was admitted into the Montreal General Hospital on the 1st of August, 1863, under the care of Dr. Robert Palmer Howard, complaining of swelling of the left eyelid and face. He states that he is employed by the Corporation to bury the dead animals found in the streets; and that he interred on Thursday the 30th July several pigs, dogs, cats, and cows, as well as other animals. On Friday morning the 31st, he awoke about half-past five complaining of slight pain in the eyelid: at the same time he noticed a white speck on the edge like a stye, and some swelling, which rapidly increased. He did not feel sick or ill. At nine consulted Dr. Reddy, who ordered a lotion and poultices, stating it was the bite of an insect. He has been in the habit of taking from two to three pints of beer per day; some time ago used to take half a pint of whiskey in the same time. He is a strong looking man. The swelling is on the left side of the face, extending from the upper part of the forehead to below the chin. The eyelid is quite œdematous, and so much swollen that he is unable to open it. The color of the integument is natural, except over the eyelids, which are of a dull red, and erysipelatous in appearance. The face is much distorted by the swelling, which is soft and doughy,—not hard at any point. No swelling of the neighboring glands. At the point on the edge of the upper eyelid a whitish colored spot is seen, which corresponds with the place where he first noticed inflammation. There is nothing like a boil or pustule or carbuncle. The swelling is uniform, and seems to be merely a serous effusion. There is a slight purulent discharge from the conjunctiva. On opening the eyelid by a speculum, the eye ball and ocular conjunctiva appear healthy; but there is intense chemosis of the palpebral conjunctiva. The swelling appears to be gradually extending to the opposite side of the face.

*Constitutional Symptoms.*—Tongue moist, and slightly coated with a yellowish fur. Pulse 78, and natural. Bowels moved yesterday,—rather confined. Feels thirsty. No headache. No pain, except in left cheek, where there is slight pain on his attempting to open his mouth.

*Treatment.*—Apply nitric acid to white spot on eyelid. Free incisions to be made in upper and lower eyelids. Bathe well with warm water. ℞ Tr. Ferri Mu. ʒ iv. Liq. Arseni chlor. ʒ j., Tr. Cinch ℥ jii. Aqua ad. ℥ xii. Take two tablespoonsful every second or third hour. ℞ Liq. Plumb. Diacet. ʒ ii. Tr. opii. ℥ ss Aqua Oj. ft. lotio. Apply diligently. Is to have milk diet, and a pint of beef tea. Lemonade for a drink. ℞ Chlorodyne ʒ ss. H.S.

*2nd August.* A good deal of serum has escaped from the incisions. He passed a restless night. Tongue coated with a white fur and moist. The swelling has reached to the right side of the face, and is extending down the left side of the neck. The countenance is fearfully distorted. He complains of a feeling of obstruction in the throat. The voice is hoarse. Says he feels as if there was a potato in his throat, which will neither go up nor down. Has taken nearly all his beef tea. Is moderately thirsty. Perfectly calm and rational during the night. Pulse 84. Skin moist and cool. To have a black draught, (which he immediately vomited.) To continue lotion to face, and apply a linseed poultice, with acetate of lead to neck. Throat to be brushed out with a solution of Agt. Nit. gr. xxx. ad aqua ℥ j, and to take a seidlitz powder every hour till his bowels move. Ordered an additional pint of beef tea, and 4oz. of brandy. 4 o'clock, p.m. Pulse 110. Skin on eyelids of both sides of face of a dark livid color. The swelling is harder, and still extending. Difficulty of swallowing greater; pain also increased. Bowels have moved twice. ℞ Quinine Sulph. gr. ii., Hoffman's anodyne, ʒ ss. Tr. Ferri. Mu. ʒ ss. Mist. Camph. ℥ j. ter in die. Brandy ℥ vj. a pint of beer. Ordered a port wine poultice to face and neck. To be removed to an empty ward and secluded. Kreosote to be applied around swelling. 10 p.m. Pulse 128.

*3rd August—noon.* Swelling continues to extend down the neck, but does not appear to be so great on the face. The color of the skin of the face, especially that of the eyelids on both sides, appears of a livid hue,—dark purple in some spots. He says he feels better, but it is evident his mind wanders a little. The difficulty of swallowing is greater, but he breathes freely. The temperature of the extremities is falling greatly. Pulse almost imperceptible. Great restlessness. 7 p.m. Very restless, and is wandering a good deal. Tries to get out of bed. ℞ Chlorodyne ʒ ss. Appears to suffer a good deal from difficulty of breathing. Has not been able to swallow for some hours. 10 p.m. Died.

*Remarks.*—There can be little doubt that the cause of this man's disorder was a bite from some insect, which had been feeding on carrion. It was, however, not like what is described as charbon, since there was no pustule or slough. There was no shivering, no formation of pus, and comparatively little constitutional disturbance for the first forty-eight hours. The pulse was only 78 when admitted fully thirty-six hours after he first noticed the swelling. He was depressed and downhearted throughout. Treatment seemed not to exercise the slightest influence over the disease. There was no swelling of the glands.

## HOSPITAL REPORTS.

*Case of Traumatic Epilepsy, under the care of* DR. JONES.—Henri Urban, a German, aged 20 years, was admitted into the Montreal General Hospital on the 11th October, 1862. About half an hour previous to admission, while standing on a ladder, hanging up a piece of meat on a hook, in the St. Lawrence Market, the ladder slipped, and he fell to the ground. In the fall his left forearm caught on a lower hook. It inflicted a severe lacerated wound. There was considerable hemorrhage until reaching the hospital, when it was easily controlled.

On the 8th of November, about seven o'clock, he was seen to enter the water-closet, and in a minute or so afterwards, a low piercing cry was heard proceeding from it. On going thither he was found in a most violent epileptic fit. He was removed to his bed, and Dr. Taylor, the House Surgeon, called; and so violent were the paroxysms, which were of a true epileptic character, that it took several persons to hold him. About a drachm and a half of chloroform was administered, without lessening the fit. Dr. Taylor accordingly bled him to the extent of eighteen ounces, which seemingly gave relief. The duration of the attack was about half an hour. A drachm of Hoffman's anodyne, with forty drops of solution of morphia, was administered soon after he came out of the fit; and about three hours after, he got five grains of calomel and one drop of croton oil.

At the time of the attack the wound had almost entirely cicatrized: he never had an epileptic fit before. He states that he felt a distinct epileptic aura commencing in the hand of the wounded arm, and gradually working up till it reached his shoulder, when he suddenly lost consciousness. The patient was dismissed on the 22d of November, quite well, not having had any repetition of the attack.

*Case of Idiopathic Tetanus, under the care of* DR. JONES.—John McNeill, an Irishman, aged 36 years, presented himself for admission among the out patients of the Montreal General Hospital, on the 10th of November, 1862, suffering from trismus. He stated that about a week previous he attempted to perform the feat of raising a chair with his teeth, when he felt his jaw receive a severe wrench, but he experienced no further inconvenience till the morning previous to admission, when he felt his lower jaw getting stiff; this continued to increase, and on admission he was barely able to open it sufficiently, to allow the handle of a spoon to enter. He was ordered a liniment of chloroform and belladonna, to apply to the muscles of the lower jaw, and to have a dose of croton oil.

12th.—Bowels have been moved freely. Difficulty of swallowing apparently increasing. Still able to open his mouth a little.

13th.—The muscles of the abdomen have become tense. Has had several spasms. To have a belladonna plaster over the abdomen, and to get twenty drops of the tincture of canabis indica every third hour.

14th.—The Indian hemp has apparently somewhat lessened the severity of the attacks. Croton oil to be again administered. The liniment ordered on admission is to be discontinued, and he is to use the following in its place: ℞ chloroform ʒ jii, tr. aconite, tr. belladonna, aa ʒ ji, liq. amm. ʒ ji, lin. saponis ℥ j. To have beef tea in large quantities.

15th.—Towards daylight this morning the spasmodic attacks became very violent, and he died in the afternoon.

*Variola treated with the Sarracinea Purpurea. Reported by* HERBERT S. TEW, M.D., *Acting Apothecary Montreal General Hospital.*—George Bonacina, painter, aged 22, was admitted into the Montreal General Hospital, 20th June, 1864, under the care of Dr. Reddy. He states that on the 17th (Friday previously) he was attacked with a severe twisting pain in the belly, near the navel, which prevented him from standing upright, his bowels constipated for a few days; from the acuteness of the pain he was obliged to seek medical relief, and applied to Dr. Reddy, from whom he received considerable benefit, although the pain had not altogether subsided. Matters continued thus till Sunday, 20th, when he again called upon Dr. R., who perceived a papular rash upon his forehead, and then decided that it was advisable that he should seek admission into the hospital. I should have stated that he considered at first he was suffering from an attack of "painters' colic." On admission he complained of severe headache, pain in the chest, spine, and abdomen, also feverishness and general uneasiness; great thirst; pulse 100, and full; tongue white, thickly coated, and moist; skin hot, with slight perspiration; on the forehead, and on the arms, legs, and trunk, a scattered minute papular rash was making its appearance. It was decided,—more especially as he had never been vaccinated,—that this would be a favorable case to give the *sarracinea purpurea* a full and fair trial. He was accordingly ordered to take two ounces of the infusion (℥ j ad. Oji) every hour.

June 22.—Pulse 88; tongue moist, and cleaner than yesterday; bowels opened twice; appetite capricious; he slept well, and feels more comfortable; pustules, filling rapidly; are getting very thick on the face and neck, also on the thighs and abdomen.

June 23.—Pulse 104; tongue clean and moist; he reports himself

feeling very comfortable, with the exception that his throat feels sore. Pustules much fuller, with good red areola, but they are more of a confluent character on the face; and all over the body a slight but distinct depression appears. He says his medicine causes him to perspire very much. On examining the throat no pustules are visible; he was ordered a warm linseed poultice, constantly renewed, and to continue the sarracinea purpurea.

June 24.—Pulse 100; tongue and throat very sore, and pustules appearing. They are confluent on the face and other parts of the body, and have to-day a rather flat unhealthy appearance. Dr. Reddy feels uneasy about the result. The patient's bowels have not been opened for two days; ordered a dose of castor oil; to continue mixture and poultices.

June 25.—Pulse 136, small and compressible; tongue and throat continuing very sore; is very restless; complains of no pain, and is occasionally very delirious; pustules continue flat, and are not filling properly. Ordered to continue the sarracinea purpurea; borax wash to mouth and throat, and the following mixture:

℞ Liq. ammon. acet, ℥ jss.; Spirit etheris nit., ℥ ss.; Vin. ipecac., ʒ i.; Aqua ad.; ℥ vi.; ℥ ss. every three hours. To continue stimulants if necessary.

June 28.—Pulse 128; soft and regular; tongue dry and brown; bowels regular; pustules present the same character: his voice is weak and husky. To continue treatment of yesterday.

June 28.—Has been very delirious all night; refuses to take either medicines or nourishment of any kind, unless with difficulty. The pustules all over body are quite flat and watery looking; he also appears to have great difficulty in breathing. From the evening of this day till 2.30 a m. next morning, he gradually appeared to grow worse, when he suddenly expired.

It is worthy of notice that the above case had never been vaccinated, and on entering hospital he appeared to be a person who had enjoyed excellent health, as was admitted by himself. This was considered a favorable case for the administration of the sarracinea purpurea, which was freshly prepared, and given most regularly, having myself carefully superintended the case from the very commencement. Dr. Reddy mentioned that he has repeatedly tried the sarracinea purpurea; he considers that in two of his cases he observed signs of benefit during its administration, but that he looked upon it, at least in his hands, as a very doubtful remedy, although, he added, that he may not have the benefit of using the fresh plant, and that perhaps failure may be partly attributed to that cause.

# REVIEWS AND NOTICES OF BOOKS.

*Medical Diagnosis, with Special Reference to Practical Medicine,—a Guide to the Knowledge and Discrimination of Disease.* By J. M. DA COSTA, M.D., Lecturer on Clinical Medicine, and Physician to the Philadelphia Hospital. Philadelphia: J. B. Lippincott & Co. Montreal: Dawson Bros.

The author of the above volume is evidently a thoroughly practical physician,—one who, having ample opportunities for observation, has put them to good use. The subject of Medical Diagnosis is full of interest to all laborers in the field of medical science; but especially is it interesting to the young physician who, during his pupilage and hospital attendance, has had but limited time to give the subject more than casual attention. It is only of late years that clinical teachers have looked upon it as the important subject it really is; and there are few now who, on entering the profession, have not instilled into them the principles of medical diagnosis. The multiplicity of subjects that engage the student's time during his attendance at college are so great, that it is impossible for his mind to thoroughly weigh the various symptoms — often so similar in different cases: hence a work like the volume before us is certainly indispensable to the young practitioner. It should be his constant study,—its teachings should be thoroughly mastered. If such was the case, we feel sure many an error,—the result of inexperience—would be saved, and professional reputation not placed in jeopardy. Even older practitioners will find this manual of medical diagnosis of great service. Each symptom is so completely analysed, and the diagnosis of each case rendered so plain, that it is almost impossible for any attentive student of the work to fall into error. The almost countless number of diseases to which the human family is heir, are grouped together according to their most marked symptoms, and not according to their pathological characters. We know that to some the former arrangement will not be so acceptable, as if the latter had been adopted. For several reasons, perhaps, it is a pity that the pathological classification has not been followed; but, taking all things into consideration, the work being more intended for junior practitioners—though of value to all—its clinical character is enhanced by the arrangement the author adopts. There is one chapter which we consider worthy of especial mention: we refer to that on diseases of the nervous system. We are yet in our

infancy with regard to our knowledge of diseases attacking nervous structures; and much of what we do know is of such small practical importance, that in many cases but little aid is afforded in effecting our diagnosis. Dr. Da Costa has evidently bestowed great care on this portion of his book, and the various symptoms are detailed with great accuracy and fidelity, analysed carefully, and so well grouped under the head of each particular disease, that we are sure every physician who obtains the work, will find his knowledge of nervous disorders vastly improved by its perusal. Regarding the uncertain nature of nervous complaints, our author says:—

"From the preceding pages it will have become apparent how many of them are functional, or are at least of necessity so regarded, and how these functional disorders may be attended with the signs of quite as great, or even greater, disturbance than the organic maladies. And nothing is more difficult than to fix their seat; for after death not the slightest structural alteration may be discernible. In consequence, there is very great confusion, and much doubt is thrown over any anatomical or pathological classification of nervous complaints. I subjoin a table of the main nervous affections, arranged according to their supposed sites. It may not suit a rigid critic, but it is convenient for purposes of reference, and I do not contend for its being unimpeachable.

"TABLE OF THE DISORDERS OF THE BRAIN AND SPINAL CORD.

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|---|---|---|
| CEREBRAL ..... | *Organic* .... | Congestion.<br>Meningitis, in its various forms.<br>Hydrocephalus.<br>Softening.<br>Hemorrhage (Apoplexy.)<br>Tumors, etc. |
| | *Functional*.. | Delirium.<br>Insanity.<br>Headache.<br>Trance.<br>Ecstasy. |
| CEREBRO-SPINAL. | *Organic* .... | Cerebro-spinal meningitis. |
| | *Functional*.. | Epilepsy.<br>Catalepsy.<br>Hysteria? |
| SPINAL ..... | *Organic* .... | Hyperæmia.<br>Spinal meningitis.<br>Myelitis.<br>Spinal apoplexy.<br>Tumours, etc. |
| | *Functional*.. | Spinal irritation.<br>Chorea.<br>Tetanus.<br>Hydrophobia.<br>Reflex spasms due to irritation of the cord. |

The various fevers are treated of at considerable length, and the differential features of each, thoroughly explained. Regarding a mistake which not unfrequently happens,—that of a typhoid condition being mistaken for a true case of typhoid fever—Dr. Da Costa thus writes:—

"No blunder is more common than to misconstrue into typhoid fever a typhoid condition of the system. We may find this condition in many different complaints, both acute and chronic; but more especially are purulent infection, some forms of pneumonia, dysentery, and erysipelas attended with delirium, drowsiness, dry brown tongue, and extreme prostration,—in one word, therefore with a typhoid state.

"Yet a typhoid state is not typhoid fever; it is simply a low condition of the system that may be present in very many dissimilar maladies, and which is present in its most perfect form in typhoid fever. But in this malign complaint we have other signs than those of vital depression; we find joined to it diarrhœa, tympanites, epistaxis, an eruption, and special manifestations of disturbance of the nervous system,—all symptoms bearing no direct relation to the adynamia, and thus serving as valuable distinctive marks. An examination, too, of the urine is often of signal service. There are, indeed, cases of Bright's disease, and of abscess of the kidney, in which the poisoning of the blood that happens, occasions a very deceptive likeness to typhoid fever—so deceptive, that only a minute examination of the urine can fully explain the true meaning of the symptoms. The following case well illustrates this:—A man, about forty-five years of age, was admitted into the Philadelphia hospital in January 1863. He was very prostrate, and hardly able to give an account of himself. It was, however, ascertained that he was not a person of intemperate habits, and that he had been attending to his work until within two weeks. He was evidently stupid, and, when questioned about himself, seemed to have great difficulty in remembering and in collecting his thoughts. He had fever; a pulse above 100; a dry brown tongue. The heart-sounds were feeble, the heart increased in size. The urine was at times turbid, and contained a slight whitish sediment, which was not, however, examined with the microscope. His mind wandered at night; the abdomen was distended, and in parts slightly tender; several doubtful red spots were detected on its surface. In fact, he appeared to have almost every one of the more constant symptoms of typhoid fever, excepting the diarrhœa. A few days after his admission he became comatose, and sank. The intestinal glands were found in a healthy condition; but both kidneys were thoroughly disorganised and filled with pus."

We could give many extracts from this work, which would be inter-

esting and valuable to our readers; but our space being limited, forbids our doing so. The main object of the work is diagnosis; but in many cases the author has added the prognosis; and where it could be done without interfering with the plan of the book, a summary of treatment. This gives increased value to it as a practical work. Having said so much in praise, we feel that there are one or two faults we must not omit to mention. We think that some chapters bear evidence of being somewhat hastily written; and throughout there is not that attention to punctuation which we would like to have seen. As a whole, however, we consider it a valuable addition to medical literature, and advise our readers to obtain a copy of the work. It is entirely different in its arrangement to Barclay's Medical Diagnosis, which is more properly a guide as to the method to be followed in investigating individual cases of disease,—this book being, as its name implies, a true diagnostic work, or an analysis of the various symptoms of disease,—assigning to each its true place. The work is beautifully printed, and forms a handsome volume of almost seven hundred pages.

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*The British Pharmacopœia.* Published under the direction of the General Council of Medical Education and Registration of the United Kingdom, pursuant to the Medical Act, 1858. Printed for the General Medical Council; By Spottiswoode & Co., New Street Square, E. C., London, octavo, pp. 444, 1864.

The British Pharmacopœia, issued by the General Council, has failed to give satisfaction to the profession. It has certainly received unsparing criticism at the hands of the Medical press in all sections of the country. It does appear strange that the Medical Council, composed as it is of twenty-five members, who are the first authorities in the United Kingdom on the subject of pharmacy, should have issued so meagre a work.

We are aware that it is not a dispensatory, nor is it expected to be. Nevertheless a somewhat more complete work, devoid of actual blunders, might have been looked for. The Medical Council are endowed with extraordinary powers, which, notwithstanding the imperial act of 1858, have in a great measure fallen through. The British Pharmacopœia is not adopted by the profession, nor will it be until it has received such alteration and modification as are in the premises abundantly called for.

If the Medical Council possess the authority of legislating for the entire kingdom and colonies, it would be well had they exhibited greater care and diligence in the performance of this part of their duty. As

colonists we speak feelingly, as, although, unrepresented, we are nevertheless informed that "the Council must further caution all Medical "Practitioners whether at home or in the colonies or in the public ser- "vices, that, in order to exercise their profession safely, it is incumbent "on them to make themselves familiar with the changes effected by the "present work."

In the first part of the work, which is confined to the organic materia medica, there are manifestly many errors, though of a minor degree, such as incorrect botanical descriptions. For instance, opium is described as occurring in "irregular lumps, weighing from four ounces to two pounds; enveloped in a poppy leaf, and generally covered with rumex seeds." That opium sometimes is enveloped in poppy leaves is undeniable, but not invariably so; again, the part of the rumex, which in the finer specimens of Smyrna opium is found adherent to the mass, is the fruit; when the seeds alone exist, they are few, and appear to have remained after much handling, whereby the capsules in which they are contained have been rubbed off. Again, black pepper is described as being brought chiefly from the West Indies; although cultivated there, yet the greater part of what is met with in commerce is brought from the Islands of the Indian Archipelago, chiefly Sumatra.

Many other imperfections we might note, did space permit, which exhibit great laxity in the preparation of this work. Many old and favored recipes have been left out or so altered as not to be recognisable. This is much to be regretted as we cannot too tenaciously hold on to a good thing. Our experience of drugs is by no means flattering; and it is a pity to see introduced into a national work, one destined to become the standard of medical practice, preparations of doubtful efficacy, and others of acknowledged worth, which have stood the test of time, either expunged or so changed as to be no longer the same, as will be found to be the case in the second part of the book devoted to "preparations and compounds."

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## PERISCOPIC DEPARTMENT.

### Medical Jurisprudence.

#### THE LA POMMERAIS TRIAL.

The prisoner, La Pommerais, was a homeopathist practitioner; he had induced his victim, Mad. Pauw, to insure her life for the sum of £22,000 in eight different insurance offices; he had also persuaded her to assign

the insurances to himself. A short time before her death, she had, by his advice, feigned illness in order to deceive the insurance offices, and obtain from them a life annuity in place of an insurance. Although a homeopathic practitioner, La Pommerais was found to be possessed of a large quantity of the most potent poisons. In the month of June last, he had purchased three grammes of digitaline, of which only fifteen centigrammes remained in his possession. At eight o'clock in the evening before the death of Madame de Pauw, La Pommerais visited her. Directly after he had left her she was taken ill, vomited violently through the night, and died at five o'clock in the afternoon of the next day.

It was on the 17th of November last that M. Paul Blachez was called to attend Madame de Pauw. On his arrival, he found her in a dying state. She was apparently unconscious; at least it was impossible to elicit any sign from her: her body was covered with an abundant cold sweat; there was great disturbance of the circulation, the pulse being irregular and intermitting. She cried out continually, in a weak voice, "Oh, my head! oh, my head!" She retched several times, but whilst he was with her did not vomit freely. She then fainted so completely that her pulse entirely disappeared, a whitish froth escaped from her mouth, and she died. He at the time attributed her death to the rupture of an aneurism. She had, however, in the September previously, consulted, amongst other medical men, a M. Gaudinot, on account of a fall which she asserted she had had, and he had attended her at intervals up to the day of her death. M. Gaudinot was applied to for a certificate of the cause of death, and he gave one to the effect that it was the result of gastro-enteritis, produced by the fall, and terminating in perforation of the stomach. Our readers will remember that the whole story of the fall and of her subsequent illness was fabricated for the purpose of deceiving the insurance companies. The evidence proved that she had been in excellent health up to the time of her death, and that just before she was taken ill she had dined heartily on vegetables.

Thirteen days after her death the body was exhumed under the superintendence of M. Tardieu, Professor of Legal Medicine and Dean of the Faculty of Medicine in Paris. The body and external organs were in a state of perfect preservation—so perfect that had any lesions, the result of previous disease, been present, they would have been at once recognised. The results of the autopsy were entirely negative. The heart was unaltered in size, and its valves acted perfectly. The blood was semi-coagulated, but there was an absence of clots. The lining membrane of the stomach was perfectly healthy, that of the intestines presented some sanguineous infiltrations, but they were few in number.

The deceased was advanced seven or eight weeks in pregnancy. The chemical analysis, which was conducted by M Roussin, was made by obtaining alcoholic and watery extracts of a portion of the stomach and intestines. The solid residue exhibited no trace of mineral poison, neither was any organic poison which could be isolated obtained from the extracts.

Shavings of the floor of the apartment on which the deceased had vomited were also procured, and for the purpose of comparison, shavings from the floor of a different part of the room. From the former, sixteen grammes and a half of alcoholic extract were obtained. This had a brown color, a peculiar rancid and oily odor, and a very bitter taste. On incineration it left no metallic residue; it was precipitated abundantly by tannic acid; the addition of sulphuric acid turned it of a reddish purple color, and hydrochloric acid produced a green tint. The extract of the shavings which were unsoiled by the vomited matters had an aspect and odor closely resembling the preceding, but it had no bitter taste, it was not precipitated by tannic acid, and only slightly colored by sulphuric and hydrochloric acids; the tints struck by these acids were entirely different to those produced in the former extract.

It was clear that this result proved nothing as to the existence of poison. The change in color produced by sulphuric acid, and the precipitation by tannic acid, are reactions common to many organic matters, and, as was observed by M. Hébert, the green color which followed the addition of hydrochloric acid would have been a more important indication had the chlorophyll of the vegetables (cauliflower and sorrel) which she had eaten, and the green coloring matter of the bile, been previously removed. In the failure of their chemical investigation, therefore, the experts had recourse to physiological experiment.

The first trial was made with the extract obtained from the shavings of the floor on which deceased had vomited. At five minutes past one a dog was inoculated with five grammes of this extract, introduced by two incisions on the inner surface of the thighs. At half-past three, the animal vomited thrice. The vomited matters were glairy and bilious. The pulse, which at the commencement of the experiment was 110, had fallen to 94; it was irregular and intermittent. The beat of the heart was irregular and intermittent, at times appearing to cease suddenly, and then becoming rapid. The respirations were slightly intermittent. At half-past four the heart-beats fell to 76, and the animal again vomited. At eight in the evening it could stand with difficulty. The slightest movement appeared painful, and provoked vomiting. The heart beats were still irregular, and 68 in the minute. At eight the following morn-

ing the animal was cold, but sensible. The heart-beats were less strong, and had fallen to 40. Their irregularity and intermittence were very remarkable. Respiration was jerking and intermitting. The animal died at eleven o'clock, apparently without pain. There was no coma. The examination of the body was made two hours after death. The ventricles of the heart were markedly contracted, although the auricles were dilated. All the cavities of the heart were filled with black, thick and partly coagulated blood. On removing the pericardium some elevations of a vivid red color were observed on the surface of the heart near the apex.

2nd Experiment.—Two grammes of the same extract were administered by the mouth to a rabbit. Great irregularity of the heart's action ensued. The beats fell to 41 in a minute. The animal died in two hours and three-quarters from the administration of the extract. The cardiac auricles were found dilated, the ventricles contracted, the latter strongly contrasted by their blackish color with the rest of the organ. The interventricular space was remarkably depressed. The apex of the heart was of a vivid red color, and the walls presented several red elevated spots.

The third experiment was one made for the sake of comparison with the extract obtained from the shavings of the floor, on which the vomited matters had not fallen. Four grammes of this extract were administered to a rabbit. It did not vomit, nor was it in the least incommoded, and two days afterwards it continued in perfect health.

The fourth experiment was made with alcoholic and aqueous extracts obtained from the stomach and intestines of the deceased. Five grammes of a mixture composed of equal parts of these extracts, were introduced into an incision made on the inner surface of the thigh of an adult vigorous dog. At three o'clock the animal's pulse beat 102 in a minute. At half-past four it seemed depressed, anxious, it respired with difficulty, its pulse had fallen to 86, and the heart's action was irregular and intermittent, but less so than in the case of the dog experimented on with vomited matters. The animal vomited twice. At eight in the evening the pulse had fallen to 55, and was manifestly irregular and intermittent. Respiration seemed difficult. The animal frequently changed its position and uttered half stifled cries; it retained its intelligence. The following day, at half-past eight in the morning, the beat of the heart had risen to 70 pulsations in the minute; the general condition of the animal was improved, and it ultimately recovered.

The fifth experiment was also made with the extracts of the viscera. Four grammes were administered to a rabbit, which died in a few

minutes. The experimenters thought that its rapid death was owing to some accidental complication—perhaps syncope—having hastened the action of the poison.

The sixth experiment was performed on three frogs. After having laid the heart bare in each, and observed that the pulsations in the three were perfectly equal, the experiment proceeded as follows :—

1. The first frog was left in the normal condition, care only being taken to preserve the humidity of the heart.

2. The second frog. Six drops of a solution containing one centigramme of digitaline in six grammes of water were injected under the skin of the belly.

3. The third frog. Fifty centigrammes of the extract made from the shavings of the floor on which the vomited matters had been spilt were injected under the skin of the belly.

The following variations in the number and beats of the heart were observed in the three animals :—

| Minutes. | No. 1. Pulsations. | No. 2. Pulsations. | No. 3. Pulsations. |
|---|---|---|---|
| After 6 | 42 | 20 | 26 |
| " 10 | 40 | 16 irregular | 24 irregular. |
| " 20 | 40 | 15 id. | 20 id. |
| " 28 | 38 | 0 | 12 very irregular. |
| " 31 | 36 | 0 | 0 |

This experiment was repeated several times with the same result.

The experts relied on the first experiment as proof of the fact that the vomited matters contained poison. The third demonstrated that the poison did not previously exist in the floor of the room. The fourth was held to prove that the stomach and intestines of the deceased contained the same poison, but in less quantity than the vomited matter, the dog having recovered from its effects. The sixth experiment on the frogs was instituted to demonstrate the nature of the poison used. The experimenters did not consider it of the highest importance, but it corroborated the former ones. It pointed to that group of organic poisons which are known especially to affect the heart's action, and heightened the probability that death had been caused by digitaline. The report of M. Tardieu drew a comparison between the symptoms exhibited by the first dog and those noticed in the last illness of the deceased. In both there were repeated and violent vomitings, and rapid loss of power. In both the pulse was irregular and intermitting; in both the heart's action was tumultuous and irregular, apparently ceasing at times, until it was finally suppressed. The following were the conclusions of the report:—

1. Madame de Pauw died from the effects of poison.

2. The poison which killed her was one of those vegetable poisons which do not leave characteristic traces in the organs of the body, nor can they be isolated by chemical analysis. They reveal their presence by their effects, and are detected by their deadly action on living beings.

3 We obtained from the vomited matters and the organs of deceased submitted to analysis a very energetic poisonous principle which when administered to animals, produced analogous effects to those observed in Madame de Pauw, and killed them in the same manner.

4. These effects and this action have a strong resemblance to those of digitaline, and without asserting it as a fact, there is a strong presumption that Madame de Pauw was killed by that agent.

5. That deceased was not really ill before the day which preceded her death.

6. The post-mortem examination proved that death was not caused by the effect of a fall, nor by an internal hemorrhage, nor by an acute or chronic gastro-enteritis, nor by a perforation of the stomach, nor by any natural cause.

We have now to examine the criticisms on the report of MM. Tardieu and Roussin, offered by M. Hébert, the expert employed for the defence. The first point noticed by M. Hébert was, that the unusual preservation of the body, as poisoning by any mineral substance was out of the question, did not favor the idea of poisoning. He next asserted that neither the chemical nor the physiological experiments made with the shavings of the floor on which the vomited matters had been spilt, were of any force. The objections to the physiological experiments were the following: The extract of the vomited matter contained organic matter in a state of decomposition, sufficient of itself to produce toxical effects. The dog in the first experiment exhibited a gradual and progressive retardation of the heart's action, and after death that organ was found in a state of contraction. There are two reasons for believing that death did not result from digitaline—the first, because MM. Bouley, Reynal, Delafond, Dupuy, and Stannius, have found that digitaline in small doses retards the heart's action, but accelerates it if given in considerable doses. Secondly, that in poisoning by digitaline, the heart, instead of being contracted, is dilated and gorged with blood.

With regard to the state of the heart, the same objection applies to the rabbit used in the second experiment. The rabbit, also being an herbivorous animal, was one of the worst which could be selected for an experiment with digitaline, for MM. Homolle and Quevenne have demonstrated that herbivora, and rabbits especially, are refractory to the action of di-

gitaline. The dog submitted to the fourth experiment was only indisposed; it did not die, much to M. Hébert's surprise, for there had been injected into its subcutaneous cellular tissue alcoholic and watery extracts of the viscera of a person who had been dead a fortnight. Although the parts were in a remarkable state of preservation, it could not be alleged that no process of decomposition had taken place in that time, and the known facts of poisoning by decomposing animal matters completely account for the phenomena observed. With regard to the frogs, M. Hébert observed that these animals were worse chosen than the rabbits, because, according to Stannius, they are exceedingly refractory to the action of digitaline. M. Hébert was astonished at the statement that the number of cardiac pulsations was perfectly equal in the three animals, because in experiments made by him he had found notable differences. The preliminary operation to which they had been submitted, consisting of raising the skin, the abdominal muscles, and sternum, in order to bare the heart, would suffice by the hemorrhage and shock produced to sensibly alter the action of the heart and to diminish the number of its pulsations. In the first frog experimented on by the experts, the pulsations had fallen from forty-two to thirty-six, whilst in one experimented on by M. Hébert they had fallen in thirty-one minutes from fifty-seven to forty-three. M. Hébert expressed himself suprised at the result of the experiment on the second frog, because he had made similar experiments with a solution of exactly the same strength. One frog had received thirty-six drops in six injections without any inconvenience; a second received fifty drops in one injection, and was but slightly indisposed, and soon recovered.

Two other objections were especially urged by M. Hébert. One was that the experts had not, for comparison, poisoned a dog with digitaline in the same manner that the dog was poisoned with the extract of the vomited matters. The other was that they had not repeated the experiment on the dog which recovered by administering a stronger dose of the extract derived from the stomach and intestines. M. Hébert concluded by insisting on the following points:—1. That there was no chemical evidence of poisoning. 2. That the experiments made on animals not only were insufficient to demonstrate the presence of digitaline in the vomited matters, but, on the contrary, proved positively that the vomited matters did not contain it. 3. That no animal was poisoned by the extract of the organs of the deceased, and that the symptoms observed in the dog inoculated with it were attributable to the action of putrefied organic matter. He concluded that the existence of poisonous matter supposed to be digitaline had not been demonstrated, and that the facts alleged

in the report of the experts did not prove that the deceased had been poisoned.

It will be observed that M. Hébert limited his attack on the evidence given by the experts to what we believe to have been the most vulnerable point in their report—the physiological experiments. He left entirely unnoticed the symptoms which had been observed before death, and the entire absence of natural disease revealed by the autopsy of the deceased. The objection to the report, founded on the state of preservation of the internal organs of the body, was answered by the statement that the experts did not rely upon that condition as any proof of poisoning, but simply as enabling them to pronounce definitely as to the non-existence of previous disease. The assertion that the extract obtained from the viscera really contained organic matter in a state of putrefaction was met by the statement that the matter with which the dog was inoculated was not the mere *debris* of the organs themselves, but was the product of the treatment of the organs with alcohol at 95 °, and with boiling water, and subsequent filtration and evaporation. The objection that a second dog had not been poisoned by digitaline was answered by the assertion that the experimenters had not thought it necessary; their conviction was complete. Moreover, that the readiness with which a dog vomits was a reason for not administering to that animal digitaline by the mouth. The only way to obviate immediate vomiting was by tying the gullet—an operation which was now allowed to have thrown doubts on the results of all Orfila's experiments. We may observe, however, that this was no answer to the objection that digitaline had not been introduced into the subcutaneous cellular tissue. Another objection, that a larger quantity of the extract of the stomach and intestines had not been given to the dog which recovered, was met by the assertion that the dog was poisoned, although it did not die. Its pulse fell from 100 to 50. It was clear that the poison existed in less quantity in the viscera than in the vomited matters. In answering the objections derived from the action of putrefying substances, M. Tardieu referred to a paper by M. Reveil, now before the Academy, which the writer supposes to have established the fact, that, contrary to the observations of Orfila and other authors, no poisonous substance, such as the cyanide of ammonium, separable by solvents or distillation, is formed during putrefaction. It need scarcely be observed that such an unsupported assertion, derived from a document not in court, would not have been received as evidence in England.

After a long discussion between the experts for the prosecution and M. Hébert in reference to the extract from the soiled shavings, the lat-

ter limited his position to the following assertion:—"That the product had caused the death of the dog inoculated with it, but that the death was not such as digitaline would have produced; and that, instead of concluding digitaline was present in it, we ought logically to conclude that it was not."

An objection was also made to the evidence derived from the shavings of the floor, on the ground that the apartment had been previously occupied by a photographer, and that some of the chemicals used in his business might have fallen and remained on the floor. The matters, examined however, were found to have been recently spilt. The photographer had not occupied the apartment for three months previously. Analysis gave no evidence of a salt of silver or of any mineral substance, whilst such substances as the cyanide of potassium, which are used in photography, would have become long before decomposed.

The evidence of MM. Claude Bernard, Vulpian, Bouley, and Reynal was taken on the question raised by M. Hébert, whether after poisoning by digitaline, the heart was contracted as asserted by the experts, or dilated as stated by M. Hébert. M. Claude Bernard stated, as the result of his experiments, that in the higher animals, when poisoned by digitaline, there is at first agitation, then after some hours, death takes place suddenly, as if from syncope. A particular characteristic of poisoning by this substance is that immediately after death red arterialised blood continues to be poured into the left cavities of the heart, because respiration continues after the complete arrest of the cardiac pulsations. Death, therefore, occurs from the cessation of the heart's action, and at first the organ is dilated by the blood which continues to flow into its cavities. But cadaveric rigidity follows much more rapidly in the muscular structure of the heart than in the other muscles of the organism. Contraction of the ventricles, therefore, rapidly replaces the dilatation, and in the course of a very few minutes they empty themselves of the blood which has been poured into them. A quarter of an hour after death the state of contraction is clearly manifest, and the rigidity continues. In answer to questions put by M. Hébert, M. Claude Bernard said that there was nothing in the condition of the dog poisoned in the first experiment which appeared to him to contra-indicate the idea of poisoning by digitaline. But the experiment would have been more convincing had the autopsy been made a few minutes instead of two hours after death. In his experience there is often in poisoning by digitaline at first an acceleration of the heart's movements, but that finally retardation sets in, and continues to increase until complete arrest terminates life.

M. Vulpian's evidence referred to the effect of digitaline on frogs. He

dissented from the statement of Stannius that digitaline did not affect batrachian reptiles. On the contrary, he found that the action of digitaline was most powerful on frogs. When injected under the skin it produced in a few minutes manifest changes in the movements of the heart; the auricles begin to contract somewhat irregularly, but the movements of the ventricle are especially affected, they contract with great irregularity, certain points of the ventricle appearing to escape the general movement; at the same time the pulsations become slower and slower, and after some minutes the heart becomes motionless. The ventricle stops first and remains empty, pale, and contracted, the auricles continue for a short time to act, but too feebly to force the blood into the ventricle; they remain fully dilated after the contraction of the ventricle. There is also this peculiarity observed, that even after the arrest of the heart's action the frog will continue to leap about with but little less vivacity than in the normal condition. There are several other poisons which act in the same way as digitaline when introduced under the skin of the frog; these are, the poison of the toad and of the aquatic salamander, *Upas antiar*, alcoholic extract of *Tanghinia venenifera*, and watery and alcoholic extracts of the *Veratrum viride*. M. Vulpian concluded by stating that he had tried other vegetable poisons and tannin, and had never observed analogous phenomena.

The experiments of MM. Bouley and Reynal had been made with digitaline on horses. They had never observed the cardiac ventricles contracted. On the contrary, the heart had always appeared flabby; but as the examinations were made five or six hours after death this might have been due to the commencement of putrefaction, which takes place much more quickly in herbivora than in carnivora, especially after death by the vegetable poisons.

The only other point to be noticed is that La Pommerais had endeavoured to explain the great diminution in the quantity of digitaline found in his possession by saying that he prescribed it externally as well as internally, and that besides furnishing it to his patients, he had distributed it to students who were his pupils. He said he had also sent a quantity to his brother-in-law, a chemist, in the country, who had the packet still in his possession. The packet was subsequently produced, and submitted to analysis by M. Roussin. Analysis showed that if digitaline was present at all it was in infinitesimal proportions. The contents of the packet consisted of sugar of milk.

In concluding an article, the length of which is only justified by the scientific importance of the trial, we shall offer but few comments. As we have said, we believe the guilt of the prisoner was entirely proved,

but we regard the evidence of the experts (we refer to their experiments) although confirmatory, and on the whole, satisfactory of its kind, as the least portion of the proof against him. We should be sorry, in the present state of science, to see a conviction for murder on such evidence alone.

A writer in a French journal has criticised the report of MM. Tardieu and Roussin on the ground that it descended too deeply into minutiæ, and as, for instance, in noticing the contracted condition of the heart, invalidated their conclusions by raising points on which a critical defence could seize. We do not sympathize with the objection. If a man's life depends on a physiological experiment, for Heaven's sake let the minutest particulars be observed and noted, whether they weigh in the scale of guilt or innocence. A more valid criticism appears to us to have been that it would have been better to avoid experiments on animals so remote in the zoological scale from Man as rabbits and frogs. We are, however, most ready to confess that, considering the great difficulties under which the investigation was conducted, it was performed with surpassing skill and sagacity. We only wish that all the great Medico-legal inquiries which have taken place in this country were as creditable to British science. But whilst thus expressing our appreciation of the performances of the experts, we are bound to add that never were we more impressed with the superiority of English judicial proceedings than when reading the reports of this trial. The debates—we had almost said altercations—between the experts for the prosecution and defence would have been scarcely tolerated in an English Medical Society, much less in a court of justice; whilst the frequent interruptions, the loose reception of evidence, the attacks of the judge on the prisoner, and his mode of detracting from the value of the evidence, offered by the defence, contrast most strongly with the order, the careful sifting of evidence, and the even-handed fairness which are the characteristic features of our own legal tribunals.—*Medical Times and Gazette.*

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# Medicine.

## NECRÆMIA, PIARHÆMIA, GANGRENE, AND GAS IN THE VEINS.

By S. Fleet Speir, M.D., Brooklyn, L.I.

Patrick Wright, æt. 44 years, of good constitution. Admitted to Brooklyn City Hospital Oct. 6, 1863, for compound comminuted fracture of the leg. Service of Dr. J. M. Minor.

The patient was engaged hoisting sugar, when a slack hawser, suddenly made tight, struck his left leg in its upper third, producing extensive comminution of the bones, and laceration of the soft parts. Amputation was advised, but the patient refused to have it performed. On the 7th he desired amputation, and at twelve o'clock m. Dr. Minor amputated at the "place of election," and the patient rallied pretty well after the operation. Three hours after amputation, pulse 114 and feeble: skin cool and face pallid; patient inclined to sleep. Ordered whiskey and beef-tea. Oct. 8th.—There was a dark discoloration of the thigh on its posterior aspect; at ten a.m. pulse 108 and quick. Oct 6th.—Considerable sloughing of the stump, and the discoloration on the back of the thigh, pits on pressure; the veins are much dilated and prominent; resonant percussion extending up the thigh of the affected limb. At ten a.m. pulse 90, feeble; skin moist; patient had two chills, one at two p.m. and another at ten p.m.; had more or less delirium during the day; would start up and desire to go home. Oct. 10th.—Was delirious and uneasy; much excited during the afternoon and evening. At half-past eight p.m. after one of his periods of excitement, he fell back, and died in a few minutes.

Oct. 11.—*Post mortem examination* 15 *hours after death.*—Body well formed; rigor mortis not well pronounced; the body was everywhere more or less resonant on percussion, due to the distension of the veins by gas, a large collection of which had accumulated in the superficial veins, giving them great prominence. A part of the cephalic vein was tied at two points, and removed with its contained gas, after which the distension of most of the veins in the neighborhood disappeared. The stump presented a bloated gangrenous appearance, and on being opened, foul gas and ill-conditioned matter escaped. *Thorax*—Lungs normal; heart eleven ounces, flabby; the veins upon its surface were distended with gas; clots in both sides of the heart. The blood contained in the blood-vessels was fluid and foamy, from the development of gas; it had a peculiar carmine color, and was loaded with oil. In the heart and large vessels the blood separated into two distinct portions, the supernatant layer consisting of clear, yellow oil, and the subjacent portion presenting the appearance of fluid venous blood, of a lighter color than usual. From a rough examination, it was thought that about one-fourth part of the liquid contents of the veins consisted of oil. The liver weighed four pounds eight ounces, and was waxy; gall bladder contained black bile. The kidneys weighed four and a half and six ounces, waxy; in one of them was a small cyst containing a yellowish fluid. Spleen weighed five ounces; appeared healthy. Upon microscopical examination, the liver and kidneys were found to be waxy; the other organs were normal. *Blood*—The blood

contained granules of hæmatoidine; its corpuscles were larger than usual; colorless corpuscles with one, two, and three nuclei, were abundant; the greater part of the field was covered with crystals of margarine, stearine, and free oil globules. On adding ether to a portion of the blood, the oil was entirely dissolved.

From a cursory examination, one would be inclined to consider this as a case of ordinary gangrene attacking the stump; but, after a more thorough investigation its pathology is found not to be so readily arrived at, and it proves to be a case of more than ordinary interest, and worthy of further consideration. The most striking features of the case are, mortification, and the occurence of gas and oil in the blood-vessels. Mortification of itself is not uncommon after severe injuries and operations—especially now-a-days. Neither is the collection of gas in the blood-vessels or connective tissue rare in such cases, but I believe the presence of so large a quantity of oil in the blood, constituting a true pathological piarhæmia, is very rare under any circumstances, and the occurrence of these three conditions together is still more remarkable.

I conceive of two ways of solving the pathology of this case. First by considering mortification, caused by a loss of vitality in the tissues of the injured limb, from the shock of the injury, from inflammation or otherwise, as the first of the train of accidents occurring after the infliction of the injury; this was soon followed by the generation of gas, from decomposition going on in the mortified parts; the gas being carried into the circulation through the medium of the veins, produced decomposition of the blood—piarhæmia and necræmia.

Or, secondly, to look upon the shock from the accident, from the operation, or both as producing primarily a disorganization of the blood. According to this theory we shall have the orders reversed; first necræmia, and as a consequence, the generation of gas in the blood-vessels from decomposition of the blood itself; then follow piarhæmia, and lastly gangrene. Comparing them in order, we have according to the first, mortification, generation of gas (from the tissues), piarhæmia, and necræmia. In the second, necræmia, generation of gas (from the blood), piarhæmia, and mortification.

In accordance with the microscopical examination of the blood, and from the fact of the gas being observed to occur first in the veins, and only secondarily and but slightly affecting the connective tissue, I conclude that the latter theory is correct, and explains the true pathology of this case; in fact, "death began with the blood," and the other conditions followed as necessary results. The cause of the disorganization of the blood, I think, must be attributed to the shock—either from the

injury or from the amputation. Among the causes of necræmia, German pathologists mention violent convulsions, overwhelming emotions, the shock from an amputation, a stroke of lightning, and even a severe exhausting labor. The shock then, was quite sufficient to account for the death of the blood. This being admitted, we can readily understand how gas may be generated by the decomposing blood, and thus account for its accumulation in the bloodvessels. It is not so easy, however, to account for the occurence of piarhæmia.

We are all aware of the physiological piarhæmia, the result of digestion, pregnancy, lactation, and hybernation. About two hours after the ingestion of ailment the serum is found to be turbid, opalescent, and semi-opaque, a transitory condition which is due to the absorption of the fatty matters of the food formed into an emulsion by the pancreatic juice, and absorbed as such in the duodenum. The microscope shows this condition to be due to the presence of a large number of fat globules and of molecular granules of albumen. According to Christison, the passage of the chyle into the blood renders the serum turbid; this turbidity lasting until the insoluble fatty matters, oleine, stearine, and margarine, enter into combination with the free soda of the blood, and become converted into oleic, stearic, and margaric acids. That the case under consideration was not a case of *physiological piarhœmia* is evident from the fact of the patient having taken very little food for some time, as well as from the absence of the peculiar lactescent appearance of the serum usual in such cases. There is, however, a *pathological piarhœmia*, the result of certain diseases. It has been noted in diabetes, chronic alcoholism, dropsy, jaundice, nephritis, hepatitis, pneumonia, and especially Bright's disease.

Various explanations have been given of the occurrence of fatty blood in disease. Dr. Babington regards piarhæmia as a fatty degeneration of the albumen of the blood. Robitansky thinks it is often due to fatty degeneration of the colorless corpuscles, which are previously formed in excess, so that it is to be regarded as a modification of leucocythemia; but he also admits the direct introduction of fat into the blood, and the liberation of combined fat contained in it to be possible causes. Virchow regards it as dependant upon the non-combustion of fat and its consequent accumulation in the blood; while he considers the presence of molecular albumen to be only a secondary phenomenon, the slow saponification of the excess of fat abstracting from the albumen of the blood the alkali required to keep the latter in solution. These explanations are all plausible, and may each be applicable in some instances; but in the case before us, the microscopical examination would not warrant us in supposing that

any of the constituents of the blood were undergoing fatty degeneration. I think Raspail gives the explanation most applicable to this case. He maintains that fat is set free in the blood for want of a free alkali to hold it in the form of a soap. The fatty matters may have entered into the blood along with the chyle through the thoracic duct, or it may have been elaborated in, and absorbed directly from, the liver; in either case it is very probable, from its present appearance, that some of it at least was once in combination with the alkali of the blood.

In consideration of the facts elicited by this examination, I present this as a case of necræmia from shock.—*American Medical Times.*

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## ON A CASE OF TAPEWORM (TÆNIA MEDIOCANELLATA,) SUCCESSFULLY TREATED WITH OIL OF MALE FERN.

By Edward Hart Vinen, M.D., F.L.S.

As I consider every instance in which tapeworm has been successfully treated, with the means by which its removal was effected, deserves to be recorded, I forward for insertion in The Lancet the following case, in which two small doses of the oil of male fern were sufficient to effect a cure:—

In July of last year, I was consulted for a little boy eight years of age, who, I was told, had for a long time previous been in the habit of passing large portions of tapeworm. The first time this was noticed was in the previous November, (1862), which induced his mother to apply for advice to a medical brother living in Scotland. He recommended decoction of pomegranate bark, which was administered frequently, and always with the effect of bringing away considerable portions of the worm; but as the remedy only gave partial relief, the mother consulted me.

As the child was very delicate, I prescribed a small dose—twenty-five minims—of oil of male fern, in mucilage, with peppermint water, to be taken at bedtime, and followed by a dose of castor oil in the morning if necessary. The result was that a large portion of the worm was expelled; but I looked in vain for the head, although from the appearance of the upper segments it was evident that the separation had taken place not far below it. At the end of a week I gave a second dose of the oil, the same strength as the first (viz., twenty-five minims), with a most successful result, for the head was expelled the next day.

My own impression was that this worm was the ordinary tænia solium; but on showing it to my friend, Dr. T. Spencer Cobbold, he pronounced it to be the tænia mediocanellata, which is generally considered to be of

much less frequent occurrence than the former, and more difficult to remove.

Küchenmeister says that "the touchstone of a remedy for tapeworms is not whether it expels bothriocephalus latus or tænia solium, but whether it is also capable of effecting this with tænia mediocanellata." And he considers oil of turpentine to be the remedy *par excellence* for tapeworm; and that the oil of male fern is insufficient, and its action uncertain. As far as this case goes, however, it militates against such an opinion; for the remedy was given without any previous preparation, and in the first instance only was it followed by a small dose of castor oil.

Since passing the head of the worm the little boy has improved in health and appearance, and, I need scarcely add, has had no return of his previous symptoms.—*Lancet.*

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## AN OUNCE OF QUININE ADMINISTERED BY MISTAKE.

We most readily give insertion to the following letter, which has been placed at our disposal by Dr. Clapton, of St. Thomas's Hospital:—

DEAR DR. CLAPTON,—It has often been a matter of reflection to me how imperfect is our knowledge of the action of the various substances employed in medicine, when used in health and in disease, and how greatly this branch of Medical science needs improvement. I am brought to admit that the reason proceeds, on the one hand, from the complicated state of our organization, in consequence of which the effect is modified by the simultaneous influences of many organs, and by a variety of circumstances not under our control; and that, on the other hand, there is still a great want of acquaintance with the properties, and I dare say, with the affinities of the various substances to the organs and tissues of the human frame.

The first difficulty may certainly be almost insuperable; the last imposes on each of us the duty of communicating to our Medical brethren what may be of interest to them, especially in regard to those remedies most commonly employed. This same consideration influences me in transmitting to you a singular fact which occurred here lately. It is as follows:—

Dr. Hayler, a military Medical man, visited in barracks a soldier, suffering from a relapse of ague, and administered to him a small dose of sulphate of quinine. At the same time, he directed a man to fetch one ounce of the same remedy from the Hospital, in order that he might have it in readiness for any emergency. The man received the bottle;

but, supposing that it was ordered for the patient just mentioned, he took it to him. In the presence of their comrades, they put the whole into a cup, adding sufficient water to make a paste of it; and the patient, although he found the medicine uncommonly bitter, did not leave off until had taken it all.

Dr. Hayler, on learning that this enormous dose had been taken, at once visited the patient. The most careful investigation left no doubt of the fact; but, with all that, *incredible dictu*, except a complete deafness and a kind of stupor, no other bad effect ensued, and no antidote was administered. He was directed to the Hospital, where he remained a week under observation, and left the establishment in the best state of health. The ague disappeared, probably never to return. I saw the man myself; he is a Swiss, named Albitz, aged 30, of small stature, and of a strong constitution.

It was not to be supposed that there was any important adulteration of the remedy in question, as all these preparations are subject to a chemical investigation before they are admitted in the Hospital Dispensary.

Now, I do not intend to discuss the various points in respect of which this case offers a peculiar interest, leaving the application of it to yourself. I merely hope that its publication may tend to diminish the popular prejudice still existing against this powerful and highly important remedy,—a prejudice which sometimes prevents us from using it. Professional men and patients may both learn once more how often symptoms, which we are so frequently led to consider the effect of quinine, ought rather to be attributed to the malady itself than to the medicine employed.

It would certainly be a difficult matter in this case to determine how much of the entire ounce was absorbed, and brought into circulation. A most careful inquiry as to the excreta for several days following its assumption would have facilitated an approximation of the amount. As this examination was not made, we can only infer, from the slight symptoms experienced by the patient, that a portion only of the quinine was absorbed. Though therefore I would not willingly encourage larger doses than we usually give, we may still feel induced by the present case to administer moderate doses in various affections besides ague, where the use of quinine is indicated. As for instance, in remittent fevers, we need not wait too anxiously till evident intermission, remembering the *occasio præceps;* so in certain cases of typhoid fever, and in acute rheumatism, we may, perhaps, more frequently try it, less deterred by the fear of increasing a supposed inflammatory condition, or of promoting severe nervous excitement. I recollect some cases of phthisis pulmonalis where

I gave daily a few grains of quinine, guided by the observation that the fever in these individual instances was in proportion to the local disease.

I am afraid, dear Mr. Clapton, I have taken up too much of your valuable time by giving you so long an account. Make what use of it you think proper, and shorten it as you please, only let the fact be known.

I am, &c.,

DR. TAUSSIG.

Rome, December, 1863.

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## ON A CASE OF POISONING BY ARSENIC.

BY C. W. BINGLEY, Ph. D., F. C. S., Lecturer on Chemistry to the Sheffield School of Medicine.

*In cases of death from arsenic, what evidence can a post-mortem examination and analysis afford, either as to the probable quantity taken, or the period that may have afterwards elapsed before death took place?*

The following are the particulars of a case I have lately been retained in, suggestive of the above inquiry. Charlotte P——, of Crowle, in Lincolnshire, a married woman, between thirty-five and forty years of age, died suddenly. At the inquest, the evidence was, that a neighbor saw her in her own house about five o'clock in the afternoon previous to her death, sitting by the fire-side. She appeared to be ailing. The witness asked her what was the matter, but the deceased was unwilling to say much, and only replied "she did'nt know." Soon afterwards the witness left her. The next morning, about six o'clock, deceased's husband called her into his house, when she found his wife had died. The husband, a laborer, on being examined, said that he had been out drinking; that when he got home it was late, and he found his wife in bed and ill. He said he was drunk, but he got her some tea, and directly she took it she was sick, and vomited. She vomited twice.* She got out of bed, and was seized with cramp in the legs, and got back into bed. She asked him to lift her in; whilst doing so she kissed him, and said it would be the last time he would ever have to do it for her. He went to sleep. About five o'clock when he woke, he found his wife dead. He had no one to assist him with his wife during the night. No evidence could be obtained of any poison having been bought by, or seen in the

* The vomit had been thrown away, and was not to be recovered when I inquired for it afterwards.

possession of either the deceased or her husband, nor were the remains of any to be found. The only druggist in the town who sold arsenic denied having ever supplied either the deceased or her husband with any. It was stated that deceased and her husband frequently quarrelled, and that he was a very intemperate man. The general belief amongst the neighbors, however, was that she had died from natural causes, or if from poison that she had taken it intentionally. The medical man of the place was of opinion that she had died from natural causes. Mr. Holgate, the coroner, however, adjourned the inquest, and ordered that in the meantime Mr. Moxon, of Kirton Lindsay, surgeon, should obtain the viscera of the deceased, and send them to me for analysis.

I accordingly received the a stomach, portion of the small intestines and contents, the gall bladder, and a portion of the liver of the deceased. The result of my examination and analysis of them was, as stated at the adjourned inquest, in substance as follows—viz., I found the stomach to contain four fluid ounces of a mucous liquor tinged with blood of a dark color; blood of a dark color suffused between the rugæ; no ulceration nor perforation of the coating of the stomach; but the whole presented an inflamed condition, and was of a dull reddish-brown color, that became brighter after exposure to the air. The small intestines were inflamed, especially that part of the duodenum adjoining the pylorus. No specks nor pasty patches of arsenic could be detected either in the stomach or intestines. The gall bladder was full of gall. The liver was uniformly of a brownish-red color, and presented no appearance of inflammation. On analysis, I discovered arsenic. The distillates with chlorhydric acid from each of the respective portions furnished, by the usual methods, tersulphide of arsenic equivalent to the several quantities of arsenious acid following—viz: The stomach 0·86 grs.; contents of ditto, 0·02 grs. A portion (nearly half) of the small intestines emptied, 1·04 grs.; contents of ditto (eight fluid ounces,) a trace only. The gall bladder and gall, 1·13 gr. A portion (not quite half) of the liver, 4·15 grs.

From the fact of my finding so small a portion of arsenic either in the stomach or intestines and their contents, compared with so much larger a quantity in the liver, the question suggested itself whether the deceased might not have had the arsenic administered to her, presuming in that case it had been exhibited in a smaller dose than a person with suicidal intent would have taken it, and that it had been given some rather more considerable length of time previous to death, so as to have admitted of its absorption to the extent I found had taken place in the liver.

The cases recorded of arsenical poisoning are exceedingly anomalous as

to the effects and symptoms exhibited. I could find none that I could apply in this case; and, in the absence of any other evidence to explain how or when the poison had been obtained and dealt with, could form only a speculative opinion on a point that might implicate a second party.

The verdict therefore was, "That the deceased had died from the effects of arsenic; but whether administered to her by any one, or that she took it herself, there was no evidence to show."—*London Lancet.*

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## PARALYSIS OF ALL PARTS BELOW THE NECK—DEATH—AUTOPSY—MALIGNANT DISEASE OF CERVICAL VERTEBRÆ.

This case is of great interest in several ways. In the first place, the dignosis of cancer was difficult, as there was no prominent symptom beyond the paralysis. It is true that there were pains in the shoulders; but these were not definite enough to lead to any certain conclusion, and, indeed, were, before he came to the Hospital, taken for rheumatism. It is only when pain follows the course of some definite spinal nerves that it can be of much use in helping us to locate disease in the spine. We have recently seen several cases of paraplegia in which the cause of the paralysis was cancer of the spine, and yet was not diagnosed during life. The sudden onset of paralysis is not likely at first thought to countenance the diagnosis of cancer; but we must remember that, although it may have been growing in the bones of the spine a long time, it may, as in Dr. Black's case suddenly invade a part of the cord, the anterior columns, where are collected in a small space the motor fibres of the muscles of the four limbs and of the trunk.

It is said in the report of the case that the effect on the cord—*i.e.*, on the anterior or motor columns—was apparently the result of pressure only. It is certainly singular that there should be so much paralysis, and yet so little apparent damage to the cord. But this is very commonly so. In a case lately in Guy's Hospital, a patient had paralysis (of motion only) in both legs. He died; and at the autopsy, although at one point there was found cancer of the bones of the spine, yet the cord looked healthy, and nothing morbid was found in it by recent microscopical examination. In all such cases, however, it is necessary that a careful examination should be made on Lockhart Clarke's method after the cord has been hardened in chromic acid. This method would clear up many obscurities. Indeed, we may say without exaggeration that Lockhart Clarke's researches open out quite a new field—not in the physiology of the Nervous System only but in its pathology too.

*History*—David B., aged thirty-five, had been out of health for about ten months, suffering from pains, supposed to be rheumatic, in the neck and shoulders. These were at times greatly relieved by Turkish baths. About three months before his death his figure began to alter, the neck becoming shorter and thicker, so that he could no longer button his shirt-collar; but he was able to continue at his work as a clerk in Pickford's warehouse up to one month before his death, complaining, however at times of difficulty in guiding his pen. On the evening of Tuesday, February 23, he had a Turkish bath, but the pains, which had become very severe, were aggravated rather than relieved by it, and he passed a very bad night. The following morning, Febuary 24, whilst at breakfast he suddenly found himself unable to raise his cup to his mouth with his right hand, and on attempting to walk into his bedroom he found he had lost almost all power in the left leg. He was then brought to the Hospital, and the loss of power soon became complete and universal in the limbs and trunk; but the sensibility remained perfect up to within a few hours of his death, if not to the very last. He died somewhat suddenly, after an agony of about two hours, of dyspnœa.

*Post-mortem.*—Body sparely nourished; still slightly warm; posteriorly somewhat livid. Rigor mortis present in muscles of lower jaw; the limbs flaccid. Head—The only appearances noticed were, that the scalp was slightly adherent; the vessels of the pia-mater somewhat minutely injected, and a small bony mass in the falx cerebri. The ventricles contained about the normal quantity of fluid. Spinal cord and its membranes were apparently healthy, except opposite the second and third cervical vertebræ and the corresponding interstitial cartilages, Springing from the bodies of those vertebræ with which it is intimately connected, and which are partially destroyed by it, the cartilages having suffered in a less degree, is a tumor the size of a walnut, by which the cord is greatly compressed, and softened apparently throughout. The tumor was also connected closely with the outer aspect of the theca, bnt had not penetrated to its inner surface, the spinal arachnoid being healthy, and the effect on the cord due, seemingly, to pressure alone. Under the microscope the tumor was found to consist of nucleated cells of irregular shapes, presenting the usual characters of so called malignant growths. It contained no oil-granules or globules. No secondary deposits were detected in any of the neighboring lymphatic glands. Heart—Twelve and a-half ounces; healthy. Pericardium contains half-an ounce of clear fluid. Pleuræ—Left, no adhesions; right, some slight adhesions at apex and posteriorly; no tubercle in either. Spleen—Nine and a-half ounces; soft and pulpy; greatly congested. Liver—Congested, but healthy. Gall bladder con-

tains some yellow bile. Supra-renal capsules seemingly natural. Kidneys—Left, seven ounces; right, six and a-half ounces. Capsules retract slightly when divided; surface smooth, extremely congested, and mottled with numerous irregular, pale, white patches, the largest the size of a split pea. On section extremely congested throughout. The bases of the pyramids slightly frayed out. On the surface of the section white patches similar to those on the exterior, with some of which they are continuous. Under the miscroscope only extreme congestion, except in the white patches, which appear anæmic, with a slightly granular condition of contents of tubules. Bladder contains a little urine; inner surface congested. Alimentary canal congested throughout, but in other respects normal. The rectum excessively distended with healthy-looking fæcal matter.—*London Medical Times and Gazette.*

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## HYDROPHOBIA.

Cases of hydrophobia still continue to occur in this town. In my last communication I informed you of the man who was bitten in the arm. The same dog bit its mistress still more severely in the cheek and ear. In her case the injured parts were immediately removed; and as yet no bad symptoms have manifested themselves, though seven months have now elapsed since the occurrence. The post-mortem examination of the poor man had not been made at the time I sent up my previous letter. The brain and spinal marrow, with the nerves proceeding from the upper part of the latter, the throat, and all the large viscera were examined; but no decidedly abnormal appearances were found. Since then two boys have died from the same fell disease. One, eleven years of age, was bitten in the lip very severely on the 10th of April. He was taken to the Royal Infirmary, two to three hours at least elapsing before his arrival there. Nitrate of silver was applied to the wound. He remained in the infirmary. On the 8th of May the first symptoms of hydrophobia manifested themselves; and on the 10th he died. In the other and more recent case—a boy of twelve years—the terrible signs of hydrophobia showed themselves on the 1st of June.—It was then recollected that he had been bitten three or four weeks before in the thumb by a strange dog, and for which nothing had been done. He died on the 3rd of June. I do not detail the symptoms in either case, because they closely resembled previous ones. They are all characterized by a peculiar susceptibility about the pharynx and upper part of the windpipe, which, as it increases, gives rise to constant efforts to clear the throat, and, in doing so, to the peculiar noises that are sometimes heard. Neither do I tell of the

treatment. Several medical practitioners saw each of the young patients, and various means were tried. Narcotics seem to be the most often resorted to, of course with the hope of alleviating the great suffering; but the result certainly does not afford any evidence in their favor. The attention of the authorities of the town has been thoroughly roused by the great number of deaths that have now occurred from this cause; and for the last few weeks the crusade against dogs has been terrific. Every day from thirty to forty people attend the Police-court in answer to summonses they have received, and are in most cases fined from 1*s.* to 5*s.* and costs for allowing their dogs to be at large. During the month of May alone 700 dogs were destroyed, and 1219 informations laid against owners. Of course these proceedings have given rise to a great deal of dissatisfaction, and numerous letters have appeared in the local journals on the subject. Still to insist on all dogs being muzzled or led by a string when out in the streets seems the only effectual remedy for checking the progress of rabies, which has been now for some years on the increase. In most of the cases of hydrophobia, it has come out in evidence that the dog that had bitten the person did also bite several other dogs; therefore, if it were practicable to confine all dogs till such as had been bitten had manifested the disease and been destroyed, there might be some hope of making hydrophobia of as rare occurrence as formerly.—*Liverpool Correspondent in Lancet.*

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## CARCINOMA ABOUT THE GALL-DUCTS, CAUSING JAUNDICE.

John G——, a bricklayer, aged fifty-eight, was admitted on the 19th February last, into Guy's Hospital, with extreme jaundice, the skin being of a greenish-yellow color, and he was much wasted. He was of healthy parentage. Twenty-four years ago he had laryngitis, but in all other respects had always been healthy. About ten weeks before admission he had to repair a slate roof, and it was raining hard the whole time; he got very wet, and went home feeling great pain and a sense of weight in his right side. In the night he was in such agony that he rolled on the floor, and thought he should die. A week after this his wife noticed that his skin was of a yellow color all over, and that the "whites of his eyes" were also yellow. From this time he became worse, and sought admission into the hospital. He said that for about four months before his illness he could never drink a glass of ale without nausea or vomiting, and he frequently had diarrhœa. He died on the 25th, six days after admission.

*Autopsy, ten hours after death.*—The under part of the liver was ad-

herent to the stomach and duodenum, and this again to the colon. These adhesions, together with the thickened tissue around and induration of the pancreas, caused a hard mass to be felt in this region. The infiltration was caused by a tough fibrous tissue, which did not present any other appearances than those of inflammation, and might have been so considered had it not been for the cancer of the liver. When the colon was dissected off there was found a hardened mass of material surrounding the portal vessels, &c., and thus the duct was perfectly closed at its termination in the duodenum. This also somewhat constricted the duodenum itself. The pancreas was excessively hard, suggesting at first a scirrhous cancer of the organ; a section, however, showed it to be hardened by inflammatory fibrous tissue around and amongst it. The new material in this neighborhood was hard and fibrous, and gave out no juice on pressure. The gall-ducts throughout the liver were much dilated, and filled with watery mucus; the gall-bladder was contracted, and occupied by white inspissated mucus; the liver was of a deep green color; the pancreatic duct somewhat distended. At the back part of the liver were several deposits, two of them being the size of beans, and hollowed on the surface as in cancer; they were firm and dry. Near these were several smaller ones, but the region where they existed was circumscribed. There were also several very hard deposits of the same kind on the under surface of the diaphragm. No disease was observed in any other part.

The microscope showed the composition of the deposits to be nucleated cells with abundance of oval nuclei.—*Lancet.*

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## THE LARYNGOSCOPE.

SIR,—In the last number of THE LANCET, and in a review of Dr. Gibb's work on Affections of the Throat, special reference is made to the importance of the laryngoscope in assuring accurate diagnosis. For the successful employment of this valuable instrument it is essential that the little mirror introduced at the back of the throat should so accurately reflect the parts beneath that the whole extent of the beautiful laryngeal apparatus may be surveyed as completely as when displayed after death. To effect this it is obviously necessary that the "faucial mirror" be introduced at a temperature sufficiently high to prevent the dimming of its surface by condensation; but it is equally important to guard that the heat be not too great, lest the sensitive membrane resent the introduction of the mirror, and the research have to be begun *de novo*. To overcome the difficulties and obviate the necessity for warming the mirror each time of its use, several ingenious plans have been tried; but nothing

has hitherto been found to succeed, although as your reviewer states, it is the one thing required to make the instrument perfect.

Some while ago I devised a very simple method by which the little reflector might be maintained at any temperature for a considerable time without requiring the attention of the operator. I ask your permission to briefly describe the application.

The faucial mirror is to be constructed with a shallow cell hollowed into the material of which it is made; and the handle, by which the instrument is held and guided, is to be made tubular. These arrangements permit of a small loop of platinum wire, carefully insulated, being placed at the back of the reflector. Each end of this loop communicates with a conducting copper wire. These fine wires run in the hollow of the handle and form flexible threads which connect the instrument with a Smee's battery of two or three cells. Such a battery once set in action continues for many hours without any appreciable variation in force. Immediately on completion of the circle the loop of platinum wire at the back of the mirror becomes heated and elevates the temperature of the reflecting surface. The amount of heat depends mainly on the strength of the battery used. The mirror may be kept gently and uniformly warm, or the wire maintained for hours at a steady white heat. I need scarcely add that this determination of the temperature is a very simple matter of detail in which no scientific laryngoscopist would find any difficulty. The use of the same warming principle for dentists' mirrors is also worthy of note.

The faucial mirror I have myself employed was made and fitted for me by Mr. Ladd of Beak-street, Regent-street, who will afford any information as to the practical application and working of this process.

HENRY G. WRIGHT, M.D., *Lancet.*

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## MEDICAL NEWS.

In London, there is one medical man to every 514 persons. — The number of medical practitioners in England in 1851 over 40 years of age, was 11,105; in 1861 there was only 9910. — The Edinburgh College of Physicians has petitioned Lord Palmerston, with reference to the grievances of the Army Medical Department. — Mr. Paget has resigned his appointment of Examiner on Surgery at the Army Medical Board. Mr. Prescott Hewett succeeds him. — Some amusement was recently caused in the House of Commons, arising out of a question put to Sir George Grey, respecting the power of the Archbishop of Canterbury to confer a degree in medicine upon any one whom he might think

worthy of that honor. The Home Secretary, amid much laughter, stated that the power had been possessed by that Primate, but he could not answer satisfactorily as to whether it could still be exercised. — Sitting rooms are to be organised in some of the Paris hospitals for patients not confined to bed. They will be allowed to engage in recreations compatible with their state of health. — Calcutta has been very unhealthy, and the hospitals have been crowded with cholera patients. — A Miss Garrett recently passed the examination before the Apothecaries' Society, London, being the first lady licensed to practice medicine in Great Britain. She lately applied to the Royal College of Physicians, London, to be allowed to present herself for examination. The question was referred to their legal advisers, who have decided that the charter of the college gave no power to admit females to examination. The application has therefore been courteously declined.—The Council of the University of Laval, Quebec, have conferred the honorary degree of LL.D. on Dr. George D. Gibb, of Portman Street, London, and formerly of Montreal. — Two hundred and seventeen candidates recently underwent their primary examination at the College of Surgeons, London, in a fortnight.

Dr. Parkes, one of the examiners at the Army Medical Board, recently, at a meeting of the Medical Council of Great Britain, delivered a somewhat lengthy address on Medical Education,—a subject which is receiving a good deal of attention at this time in the Mother Country. He stated that it was impossible to do away with the entrance examination, to the Army Medical Department, so long as candidates continued to present themselves who possessed the double qualification of physician and surgeon, and were so sadly deficient in the practical parts of their profession. To prove his assertion, Dr. Parkes read a number of questions and answers given by candidates, who of course were not successful. We copy the following from his address:

" How, sir, can we pass a man into the service who knows so little of anatomy as this—that he does not know the radius from the ulna, the os calcis from the astragalus—that he believes the œsophagus is in front of the arch of the aorta, and that the aorta may rise from the right ventricle? In surgery, sir, I do not think Mr. Syme would allow us to take a man into the army who gave an answer of this kind,—who, when asked what he would do for a partly-divided, or completely-divided, artery, replied, and in writing too, not in the hurry of oral examination, that he would immediately amputate the limb above the injury? I do not think Mr. Syme would approve of a man who, when asked how he would treat an incised wound of the knee-joint, after suggesting various remedies, replied, that if the inflammation still went on he would make

large incisions into the joint. I do not think any one would wish to pass a man who, when he was asked, "what would you do if, after delivery, a woman had her breasts unpleasantly full of milk?" would answer, "I would pass a trocar into the breast." Then, in examination upon medicine, I cannot pass a man who cannot diagnose a single case of phthisis, or who, when he is taken to the bedside, and there is a board at the head of the bed with the name of the disease upon it, "aneurism of the aorta," with bulging pulsation, shrill and loud murmur, who knows it is a case of aneurism of the aorta, who takes twenty minutes to examine the case, and half an hour to write down what he can tell about it, and cannot put down a single symptom or sign of aneurism of the aorta; nor can I pass a man conscientiously, as a man well up in the practice of medicine—a man who has been two years at a London School of medicine and one year at a Scotch School—who tells me that all that time he has never once heard that the term "scabies" is applied to the disease called the itch. Then, sir, to cite some few more instances in what we call natural history: (and here I should have liked to have passed these papers to Dr. Christison. I will not do so; but I know that on these points he will feel particularly interested, for I know that for years Dr. Christison has in his lectures most properly called attention to the subject; and I must say the Edinburgh men have always given correct answers on these points, and in consequence have directed particular attention to the article of diet. And I am sure there can be no more important subject for the study of the medical student than digestion and diet, in these days when every man in the country is talking about diet, and knows a great deal upon the subject:) —here is an answer given by an Englishman, not a Scotchman; a man at a first-rate London school; a man who had passed his examinations as a surgeon and apothecary. The question is this: "Mention the principal heads under which alimentary substances may be arranged, and give one or two instances of each?" Nothing can be more simple: it is a question that is put in class examination. I will read the answer of this gentleman, who, I need not say, did not pass into the army:— "The division is into the nitrogenous and the non-nitrogenous aliments: these may be subdivided into albuminous, fibrous, caseous, and gaseous. An example of the nitrogenous is, all vegetables; of the non-nitrogenous, all meats, including carnivora"—carnivora being wrongly spelt. "Of the subdivision albuminous, perhaps the most common example is the hen's egg; of the fibrous, the meat of the ox or sheep. Veal and pork, I believe, do not contain so much fibrin. Of the caseous, milk and cheese; of the gaseous, soda water."

# Canada Medical Journal.

MONTREAL, AUGUST, 1864.

## THE BRITISH PHARMACOPŒIA.

The General Council of Medical Education and Registration of Great Britain is composed of three physicians and three surgeons, appointed by her Majesty, with the advice of her Privy Council, and of one representative from each of the colleges and universities in the United Kingdom. By the Medical Act of 1858, among other powers granted them, they were entitled to issue a book containing a list of medicines and their compounds, to be termed the "British Pharmacopœia," which, when published, "shall for all purposes be deemed to be a substitute, throughout Great Britain and Ireland for the several Pharmacopœias already in use."

The necessity for uniformity in pharmaceutical preparations is unquestionable. It is not to be long tolerated in these days of telegraphs and railroads, when a man can breakfast in London and dine in Edinburgh, that he should be subject to the risk of being hurried from this mortal sphere, simply because he presents a prescription received from some London physician, and which if prepared in that city would be at least harmless, but which, if made up in Edinburgh, might send him, without much warning, to eternity. We are supposing a strong case, but one, nevertheless, which might occur. It is, therefore, in every way desirable that uniformity in the strength of medicinal agents should exist throughout the whole kingdom, and extend to the colonies. The question now becomes, whether the work issued by the Medical Council fulfils the requirement,—is it in itself a complete work, or one which should command the confidence of the medical public.

On all sides it is regarded with disfavor, and has suffered at the hands of the entire medical press very severe criticism,—and very justly so, when we look into the work itself: in fact, the Medical Council allow that it is wanting in many particulars, and have, at a recent meeting, appointed a committee, consisting of one member for Scotland, one member for Ireland, and two for England, with the President, whose duty, in the language of Dr. Quain, was "to consist in drawing up a plan as to

the extent to which the present Pharmacopœia should receive modifications. The committee was intended for supervision, not for work. It would be their endeavor to find one or two editors, to whom the task of revising the work would be assigned, under the supervision of the committee." It is much to be regretted that this was not done at first. The British Pharmacopœia as at present issued is a dead letter, and has become a tax on all who have paid out their money for a copy.

It is needless here to add how premature we in Canada should be, were we to adopt this as the national Pharmacopœia, which, in the course of a month or two, must receive such modifications and alterations as to constitute in reality a new work.

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## RE-VACCINATION.

The question of vaccination is one which the recent prevalence of that very loathsome disease small-pox in our midst has brought home with great force to every one. There can be no doubt now that the discovery which has made the name of Jenner imperishable, has not conferred all those benefits upon the human family, that its sanguine discoverer hoped and wished for. Small-pox has not been blotted out from the category of diseases. On the contrary, it now and then breaks out, carrying dismay into the community where it appears. Why is this? And why is it that we find those who have been vaccinated in youth, and who bear upon their arm good evidence of the fact,—becoming its victims, not alone with the discrete variety, but the malignant confluent? Are all the charms of vaccination, — all the benefits it is said to confer,—a myth? Are the labors of Jenner to be thrown aside, and this disease—the one perhaps most dreaded of all others—be allowed once more to spread itself from city to country, until it is epidemic from one end of Canada to the other? This is no idle dream,—no alarmist's words,—but those, we fear, of sad reality. In February the number of deaths recorded from small-pox in Montreal was 17. In May we find the number has increased to 48; and from what we know of the prevalence of the disease during the month of June, we fear the number will not be behind the last. Is there nothing then which can be done to stay the progress, to arrest the prevalence of this fearful disease? We think there is. And it is for the purpose of drawing the attention of the profession to the matter, that we pen these lines. We think that the object for which vaccination was introduced can be very nearly accomplished by a rigid system of re-vaccination. There can be no denying the fact—for fact it is,—that the protective power which the vaccine lymph gives, is

not continuous; it has an end, when the person vaccinated is almost as liable to the disease as if never the subject of vaccination. Our own experience on this subject during the last two years and a half has been extensive, and our success in re-vaccination most satisfactory. The exact time at which the protective power of the vaccine lymph dies out is not certainly known; nor is there such a uniformity in its disappearance as to warrant an age being positively stated. Very few children, however, over seven years of age, whom we have subjected to re-vaccination, have failed to give us a vaccine scab, which in the great majority of instances, in every feature, bore the sign of a good vaccine pustule.

Some four years ago, Parliament passed an act, authorising the corporations of the chief cities of the Province to appoint public vaccinators, and imposing a penalty of five dollars on every parent or guardian of a child who, within three months after its birth, neglected to have it vaccinated, either by the public vaccinator, or some other legally qualified medical man. We know not what other cities have done; but after the matter had been brought forward by our esteemed friend Dr. Hall in the *British American Journal*, the City Council of Montreal took action in the matter, and put the act in force by appointing three medical men as public vaccinators. During the first two years after their appointment, few, owing to non-acquaintance with the existence of the act, took any notice of it: the result being a comparatively small number of vaccinations; but owing to the distribution by the police authorities last spring of circulars, containing a digest of the act, broadcast through the city, the number of vaccinations this year is very largely in excess of any previous year. From returns handed us on the 15th of July, we find the following have been vaccinated by the gentlemen appointed by the Council, since the 1st of January last. In the East, West, Centre and St. Lawrence Wards, 198. St. Anns and St. Antoine, 415. St. James, St. Louis and St. Marys, 810. Total, 1423.

This is very satisfactory, so far as it goes; and we have no doubt that its influence has and will be felt, in mitigating to a considerable degree, the severity of the disease. But unless re-vaccination, say every seven years, is as compulsory as primary vaccination in young children, and the public as thoroughly imbued with the idea that re-vaccination is as essential to save the youth and adult, as primary vaccination is to the young infant, then is all previous labor lost, and the disease will still continue to have the same full scope to commit its ravages. Perfection, if such a state of things can exist, can only be reached by experience; and the latter assuredly points towards re-vaccination as the only way to

secure as nearly as possible perfect immunity from the disease. We would therefore call the attention of the hon. member who introduced the Vaccination Act, to the absolute necessity which exists for the introduction into it of a clause, rendering it compulsory for vaccination to be repeated every seven years. We have given the matter much thought, and trust that the profession throughout the Province will aid the work by inculcating among their private patients the benefits of re-vaccination.

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## THE LATE RAILWAY DISASTER.

The report of this unfortunate affair has been read by all. To attempt a description would be foreign to our purpose and quite unnecessary. It is miraculous that so many escaped with life. We have on several occasions looked from the window of the cars while passing over the bridge at Belœil, and invariably experienced a sense of relief when we found ourselves once more on *terra firma.*

The wounded were brought to this city and distributed between the two hospitals. In the Montreal General Hospital there were admitted 138, all more or less injured. And in the Hotel Dieu 109 were taken into the house, 89 of whom were injured, making a total of 247. All suffered more or less from the jar, some in a very slight degree. At the time we write, about two-thirds have recovered, and have left the city for their destination west.

The Grand Trunk Company are settling the claims of sufferers with promptitude and liberality. Everything that human skill and Christian kindness could suggest, has been done by the authorities of both hospitals, to relieve the sufferers. This large accession to the number of inmates of both hospitals has necessarily entailed extra labor on the physicians in attendance,—a labor which has been one of love.

Admitted into the Montreal General Hospital of men, women and children, 138. Slight contusions, 89; severe contusions, 6; injury of spine with paraplegia, 1; Fracture of skull, 1; of face with paralysis of eye-lid 1; of leg, 3; of thigh, 2; of arm, 4; of clavicle 4; of body of scapula, 1; of neck of scapula, 1; of rib, 1; not injured, 25. One woman brought to Hospital dead, 1; One woman died shortly after admission. Two children included in above have since died.

There were admitted into the Hotel Dieu Hospital, of men, women and children, 109. Of these there were: Slight contusions, 50; severe contusions, 20; fractures of arm, 6; fracture of leg, 1; fractures of arm and leg, 2; fracture of clavicle, 2; fractures of scapula, 1; dislocation of shoulder, 4; amputation of thigh, performed at Belœil, 1; delivery, the

night of admission into hospital, 1; died from concussion of brain, 1; total, 89. The remaining 20 were chiefly children, and relations of parties injured, but who had themselves escaped without a scratch.

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## THE LA POMMERAIS TRIAL.

In the first number of the "Canada Medical Journal" we announced that a homeopathic physician had been arrested in Paris on a charge of poisoning his mistress with digitaline, he having first effected insurances on her life to a large amount, the policies being transferred to him. Since then the trial has taken place; he has been found guilty, condemned to death, and executed. Its details are so interesting, and the nature of the experiments to further the ends of justice so unusual, that we deem no apology necessary for occupying so much of our space with it. From the evidence, both circumstantial and scientific, no other verdict but the one of guilty could be arrived at; yet not a great while ago in England, evidence derived from experiments made with the vomited matter and extracts made from the viscera, was rejected by a jury as being untrustworthy, though submitted by one of the most eminent toxicologists of the day. The digest of the trial is copied from the "Medical Times and Gazette," of May 28.

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## DEATH OF PROFESSOR MILLER OF EDINBURGH.

Of late death has been busy with the leading members of our profession, many being cut off in the prime of life, and in the full tide of their prosperity and usefulness. The name which heads this article is one familiar to every Canadian surgeon, many of whom have followed (as it was our pleasure not many winters ago) his thoroughly practical lectures in the University of Edinburgh. Professor Miller received the appointment of Professor of Surgery in the above-named University in 1842, and he ably filled the chair up to the time of his death, which took place on the 18th June, from congestion of the brain, after an illness of three weeks. He was in the prime of life. His chief works were his "Principles of Surgery," and his "Practice of Surgery," two separate volumes, which last spring were both republished in one volume, thoroughly revised, entitled, "A System of Surgery." On the subject of total abstinence, Professor Miller took a great interest, and a work written by him, entitled "Nephalism," and published by the Scottish Temperance League, had a large sale. He was a pupil of Liston—on graduating, became his assistant; and when that famous surgeon re-

moved to London, Professor Miller succeeded to his practice. The death of this distinguished surgeon will leave a blank in the Edinburgh School which will not be easily filled. He was but 52 years of age.

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We learn from the London *Lancet*, that the surgeon of the Confederate steamer Alabama was Dr. David Herbert Llewellyn, son of the Rev. David Llewellyn, curate of Euston Royal, Wilts, England, and that he sank with the ship. The following touching episode is related of him: "When the boats were full, a man who was not wounded endeavored to enter one, but was held back by Dr. Llewellyn. "See," he said, "I want to save my life as much as you do, but let the wounded men be saved first." "Doctor," said the officer in the boat, "we can make room for you." "I will not peril the wounded men," he replied. He remained behind, and sank with the ship. A monument is about to be raised to his memory in Charing Cross Hospital, where he received his professional education.

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## UNIVERSITY OF M'GILL COLLEGE.

We have received the annual announcement of the Medical Faculty of this University for the coming Winter Session, which commences on Monday, the 7th November. Information may be had by applying to the Dean of the Faculty. See advertisement on cover.

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CANADIANS AT EDINBURGH.—Mr. Montizambert, and Mr. Sewell, (the latter, son of Dr. Sewell) of Quebec, received the degree of M. D. at the last convocation of the Edinburgh University. Dr. Sewell remains in Edinburgh as House Surgeon in the Royal Infirmary under Mr. Syme.

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UNLICENSED PRACTITIONERS.—We notice by the Quebec papers that the College of Physicians and Surgeons has prosecuted an unlicensed practitioner at St. Croix, County of Lotbinière, named Charles Ouellet. He was fined £5 and costs. When will they commence a similar course in our own city?

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In a late discussion at the Parisian Surgical Society, on amputations, M. Broca observed that statistics proved little or nothing in the matter. Amputations made in Paris and in the provinces were followed by very different results. In the provinces, amputation of the thigh generally succeeds; but in Parisian hospitals, it is an operation of extreme danger,

death being the rule, and recovery from it the exception. Statistics, according to M. Broca, show that the mortality in Paris hospitals after amputation of the thigh for injuries is 100 per cent.! Trélat makes it 83 in 100 cases.

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The new Morgue in Paris is just completed. It has twelve tables of black marble, and the room is lighted from the ceiling. Photographic likenesses of unclaimed bodies are taken and preserved. A place of this kind is sadly needed in Montreal, and indeed in every city of the Province.

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We trust that our subscribers will not fail to send us the notes of interesting cases, which may come under their observation. We wish to make the original department of the *Canada Medical Journal* thoroughly instructive, and ask the profession to second our efforts. For our next number we have the promise of two valuable articles—and under our Hospital Report Department, we trust to be able to give the notes of some very interesting cases of paralysis. We have made arrangements which, we think, will very shortly make this department a feature of our journal.

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THE FOLLOWING BOOKS HAVE BEEN RECEIVED:

On Diseases of the Throat and Windpipe. By George D. Gibb, A.M., M.D., Assistant Physician and Lecturer on Forensic Medicine, Westminster Hospital. London; John Churchill. (From the Author.)

On Diseases of the Skin. By W. Fraser, M.D., Lecturer on Materia Medica, at the Carmichael School of Medicine. Dublin; Fannin & Co. (From the Author.)

A System of Obstetries, illustrated by Hugh L. Hodge, M.D. Philadelphia; Blanchard & Lea. (From the Publishers.)

A Treatise on Human Physiology. By John C. Dalton, Jun., M.D. Third edition. Blanchard & Lea. (From the Publishers.)

Medical Diagnosis. By J. M. Da Costa, M.D. Philadelphia; J. B. Lippincott & Co. (From Dawson Brothers.)

The British Pharmacopœia. London; Spottiswoode & Co.

The Natural Laws of Husbandry. By Justus von Leibig. Edited by John Blyth. Reprint. New York; D. Appleton & Co.

Practical Pharmacy. By Edward Parish. Philadelphia; Blanchard & Lea. (From the Publishers.)

Pathology and Treatment of Venereal Diseases. By Freeman Bumstead, M.D. Philadelphia; Blanchard & Lea. (From the Publishers.)

## MORTALITY OF THE CITY OF MONTREAL IN MARCH, 1864.

*Compiled from the Cemetery Returns, by G. E. Fenwick, M.D.*

MOUNT ROYAL CEMETERY.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | 2 to 10 years. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 2 | 4 | 6 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. | .. | .. | 2 | 6 | .. |
| Senile Debility | 2 | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | 2 |
| Infantile Debility | 1 | 5 | 6 | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 2 | .. | 1 | 1 | 6 | .. |
| Small Pox | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. |
| Scarlet Fever | 8 | 9 | 17 | .. | 3 | 13 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | 4 | 2 | 1 | .. | 2 | 1 | 14 | 3 |
| Fever | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 |
| Convulsions | 1 | 1 | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 | .. |
| Inflammation of Brain | 3 | 3 | 6 | .. | 2 | 2 | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | 3 | 3 | 3 |
| Apoplexy | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| Paralysis | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| Croup | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. |
| Hooping Cough | .. | 2 | 2 | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | 2 | .. |
| Inflammation of Lungs | 4 | .. | 4 | .. | 2 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | 3 | 1 |
| Consumption | 4 | 5 | 9 | .. | 1 | 1 | 1 | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 2 | 3 | .. | .. | .. | 3 | 6 |
| Disease of Heart | 1 | 2 | 3 | .. | .. | 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | 2 | 1 |
| Asthma | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Inflam. of Bowels | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 |
| Diarrhœa | 2 | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 1 | 1 |
| Puerperal Fever | .. | 2 | 2 | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 1 | 1 |
| Dropsy | 2 | 1 | 3 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | .. | .. | 1 | 2 | |
| Disease of Liver | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Disease of Spine | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. |
| Tumour | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. |
| Cancer | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| Total | 35 | 39 | 74 | 6 | 17 | 24 | 3 | 5 | 5 | 3 | 4 | 3 | 2 | 1 | .. | 1 | .. | 3 | 2 | 19 | 12 | 12 | 13 | 1 | 3 | 9 | 49 | 25 |

ROMAN CATHOLIC CEMETERY.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | 2 to 10 years. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Sœurs Grises. | Not of Montreal. | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 9 | 2 | 11 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | 1 | 3 | .. | 3 | 11 | .. |
| Senile Debility | 4 | 3 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 3 | 1 | .. | .. | .. | .. | 4 | 3 |
| Infant. Debility | 48 | 48 | 96 | .. | 96 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11 | 4 | 6 | 4 | 6 | 10 | 44 | 11 | 89 | 7 |
| Small Pox | 8 | 8 | 16 | .. | 4 | 10 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 3 | .. | 3 | 3 | 3 | .. | 1 | 14 | 2 |
| Measles | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. |
| Scarlet Fever | 69 | 43 | 112 | .. | 36 | 73 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11 | 35 | 6 | 12 | 18 | 21 | .. | 9 | 77 | 35 |
| Fever | 1 | 1 | 2 | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 2 | .. |
| Inflam. Brain | 2 | 1 | 3 | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. |
| Paralysis | 3 | 3 | 6 | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | 1 | .. | .. | 1 | 1 | 4 | 2 |
| Croup | 1 | 1 | 2 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | 1 |
| Hoop'g Cough | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. |
| Inflam. Lungs | 2 | 2 | 4 | .. | .. | .. | .. | .. | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | 1 | 4 | .. |
| Consumption | 10 | 10 | 20 | .. | .. | .. | 4 | 5 | 6 | 5 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 2 | 3 | 2 | 3 | 1 | .. | 6 | 10 | 10 |
| Disease Heart | 1 | 1 | 2 | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | 1 |
| Asthma | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 2 | .. |
| Dentition | 9 | 3 | 12 | .. | 12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 2 | 2 | 3 | 2 | .. | .. | .. | 10 | 2 |
| Worms | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. |
| Inflam. Bowels | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| Disease Liver | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. |
| DiseaseKidney | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Dropsy | .. | 6 | 6 | .. | .. | 1 | .. | .. | .. | .. | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 5 | .. | 1 | .. | .. | 5 | 1 |
| Childbirth | .. | 6 | 6 | .. | .. | .. | .. | 4 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | .. | 1 | 5 | 1 |
| Rheumatism | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. |
| Abscess | 3 | 2 | 5 | .. | 1 | 2 | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | .. | .. | 1 | 1 | 5 | .. |
| Accidental | 3 | .. | 3 | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 1 | 3 | .. |
| Total | 180 | 142 | 322 | 11 | 150 | 95 | 6 | 13 | 13 | 11 | 2 | 10 | 7 | 3 | 1 | .. | 2 | .. | .. | 38 | 55 | 32 | 31 | 39 | 42 | 46 | 37 | 256 | 66 |

## MORTALITY OF THE CITY OF MONTREAL IN APRIL, 1864.

*Compiled from the Cemetery Returns, by G. E. Fenwick, M.D.*

### Mount Royal Cemetery.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 2 | 3 | 5 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 2 | 1 | .. | .. | 1 | 5 | .. |
| Senile Debility | 2 | 2 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 1 | .. | .. | .. | .. | 1 | .. | 2 | .. | .. | 1 | .. | 2 | 4 |
| Infantile Debility | .. | 2 | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 2 | .. |
| Small Pox | 1 | 1 | 2 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 2 | .. |
| Measles | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. |
| Scarlet Fever | 6 | 5 | 11 | .. | 3 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 4 | 1 | .. | .. | 2 | 1 | 10 | 1 |
| Fever | 1 | 2 | 3 | .. | .. | .. | 1 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 1 |
| Inflammation of Brain | 4 | .. | 4 | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 1 | .. | .. | 3 | 1 |
| Apoplexy | 2 | 2 | 4 | .. | .. | .. | .. | 2 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 2 | 1 | 3 |
| Paralysis | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Epilepsy | .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 |
| Hooping Cough | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Croup | 2 | .. | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 1 | 1 |
| Inflammation of Lungs | 4 | 8 | 12 | .. | 4 | 1 | .. | 4 | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | 1 | .. | 1 | 2 | 5 | 2 | .. | .. | 1 | 5 | 7 |
| Consumption | 1 | 3 | 4 | .. | .. | .. | 1 | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | 1 | .. | .. | 3 | 1 |
| Disease of Heart | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Asthma | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 |
| Dentition | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. |
| Inflam. of Bowels | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. |
| Disease Liver | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 |
| Dropsy | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| Puerperal Fever | .. | 2 | 2 | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | 2 |
| Rheumatism | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cancer | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Accidental | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | 30 | 32 | 62 | 5 | 16 | 14 | 2 | 8 | 5 | .. | 1 | 5 | 5 | .. | 1 | .. | .. | 2 | .. | 11 | 12 | 14 | 8 | 3 | 4 | 8 | 37 | 25 |

### Roman Catholic Cemetery.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Sœurs Grises. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 5 | 1 | 6 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | 3 | .. | .. | .. | 6 | .. |
| Senile Debility | 7 | 4 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 3 | 4 | 1 | .. | 1 | .. | .. | 1 | 1 | 1 | 1 | 1 | 1 | .. | 9 | 2 |
| Infant. Debility | 49 | 45 | 94 | .. | 94 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 6 | 4 | .. | 11 | 7 | 7 | 49 | 87 | 7 |
| Small Pox | 17 | 23 | 40 | .. | 11 | 21 | 5 | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 5 | 5 | 5 | 3 | 6 | 13 | .. | 31 | 9 |
| Measles | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Scarlet Fever | 57 | 60 | 117 | .. | 39 | 78 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 15 | 32 | 8 | 14 | 18 | 14 | .. | 80 | 37 |
| Fever | 1 | 1 | 2 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 1 | 1 |
| Inflam. Brain | 5 | 2 | 7 | .. | 5 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 1 | 2 | 1 | .. | 5 | 2 |
| Delirium Trem | 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| Paralysis | 1 | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. |
| Croup | 5 | 4 | 9 | .. | 4 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | 2 | .. | 4 | 9 | .. |
| Inflam. Lungs | 5 | .. | 5 | .. | .. | 1 | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | 1 | .. | 1 | 4 | 1 |
| Consumption | 10 | 17 | 27 | .. | .. | .. | 4 | 13 | 9 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 3 | 4 | 4 | 1 | 4 | 1 | 5 | 15 | 12 |
| Disease Heart | 4 | 5 | 9 | .. | .. | .. | .. | 1 | 2 | 3 | 1 | 1 | 1 | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | 3 | 1 | .. | .. | 2 | 7 | 2 |
| Asthma | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. |
| Dentition | 6 | 6 | 12 | .. | 12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 4 | 3 | 2 | .. | .. | 11 | 1 |
| Disease Liver | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Dropsy | 2 | 1 | 3 | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | 1 | 2 | 1 |
| Childbirth | .. | 7 | 7 | .. | .. | .. | 1 | 3 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 3 | 1 | .. | 2 | .. | 2 | 5 |
| Erysipelas | 1 | 2 | 3 | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | 2 | 1 |
| Gangrene | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| Rheumatism | 2 | .. | 2 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 2 |
| Cancer | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| Accidental | 3 | 2 | 5 | .. | .. | .. | 2 | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | .. | .. | .. | 1 | 3 | 2 |
| Total | 184 | 181 | 365 | 6 | 165 | 107 | 15 | 24 | 21 | 8 | 3 | 7 | 4 | 4 | 1 | .. | 4 | 2 | 1 | 42 | 56 | 27 | 45 | 46 | 47 | 51 | 44 | 276 | 89 |

# ABSTRACT OF METEOROLOGICAL OBSERVATIONS,

*Taken at the Montreal Observatory, Latitude 45° 31′ N. Longitude, 4h. 54m. 11s. W. of Greenwich. Height above level of the Sea 182 feet. For the month of March, 1864.*

BY CHARLES SMALLWOOD, M.D., LL.D.

| Day of Month. | Reading of the Barometer, corrected, and reduced to 32° F. | | | Reading of Thermometer. | | | Mean Tension of Vapor. | Mean Humidity of the Atmosphere. | General direction of Wind. | Horizontal movement in 24 hours in miles. | Mean extent of Clouds in 10ths. | Depth of Rain in inches. | Depth of Snow in inches. | Ozone in 10ths. | Weather, &c. | Remarks for the Month. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Highest | Lowest. | Mean. | Max. | Min. | Mean | | | | | | | | | | |
| | Inches. | Inches. | Inches. | | | | | | | | | | | | | |
| 1 | 29.943 | 29.770 | 29.868 | 32.0 | 16.0 | 25.9 | .135 | .894 | W | 87.61 | 8.0 | .... | .... | 1.6 | | |
| 2 | .900 | .619 | .777 | 34.1 | 18.9 | 28.4 | .131 | .887 | WbyN | 115.18 | 6.3 | .... | Inapp | 3.0 | Snow. | Barometer.... Highest, the 22nd day, 30.295 inches. Lowest, the 12th day, 29.197 " Monthly Mean, 29.824 " Monthly Range, 1.098 " |
| 3 | 30.042 | .920 | 30 001 | 34.0 | 8.9 | 24.5 | .138 | .867 | WbyN | 149.88 | 0.0 | .... | .... | 1.3 | | |
| 4 | 29.551 | .483 | 29.510 | 56 7 | 21 1 | 40.2 | .251 | .826 | S W | 65.63 | 0 6 | .... | .... | 1.3 | | |
| 5 | .508 | .451 | .480 | 40.1 | 34.6 | 37.4 | .212 | .878 | N E | 280.23 | 8.6 | Inapp | .... | 3.6 | Rain. | |
| 6 | .700 | .541 | .496 | 40.2 | 31.9 | 36.5 | .206 | .869 | S W | 103.00 | 10.0 | 0.170 | .... | 3.3 | Rain. | Thermometer Highest, the 29th day, 54°7. Lowest, the 21st day, 2°1. Monthly Mean, 32°07. Monthly Range, 52° 6. |
| 7 | .501 | .411 | .501 | 34.9 | 32.0 | 33.0 | .188 | .890 | S W | 290.82 | 10.0 | .... | 2.34 | 5.0 | Snow. | |
| 8 | .721 | .523 | .682 | 37.3 | 25.1 | 31.3 | .173 | .887 | S W | 104.59 | 6.3 | .... | 6 10 | 4.0 | Snow. | |
| 9 | .985 | .778 | .885 | 40.0 | 18.2 | 29.3 | .155 | .819 | W | 146.61 | 0.6 | .... | .... | 1.6 | Aurora Bor. | Greatest intensity of the Sun's rays, 74° 7. |
| 10 | .862 | .722 | .792 | 42.4 | 22.4 | 30.7 | .171 | .863 | W | 95 56 | 3.6 | .... | .... | 1.6 | | Lowest point of Terrestrial radiation, —7° 0. |
| 11 | .482 | .268 | 368 | 48.3 | 31.1 | 39.9 | .246 | .939 | N E | 98.64 | 8.6 | Inapp | Inapp | 3.3 | Rain. | Mean of Humidity, .880. |
| 12 | .601 | .179 | 428 | 42.2 | 31.9 | 38.7 | .226 | .886 | W | 152.25 | 8.6 | 0.849 | 0.849 | 3.6 | Rain. | Rain fell on 8 days, amounting to 1.235 inches. |
| 13 | .726 | .700 | 717 | 48.2 | 31.4 | 36.6 | .209 | .860 | W | 204.40 | 3.3 | .... | .... | 3.3 | | Snow fell on 7 days, amounting to 8.93 inches. |
| 14 | .804 | .709 | 736 | 44.2 | 15.0 | 28 7 | .160 | .829 | W | 208.00 | 1.0 | .... | .... | 2.0 | | Most prevalent wind, N. E. |
| 15 | .784 | .761 | .776 | 37.2 | 10 2 | 24.8 | .105 | .861 | WbyN | 177.04 | 8.6 | .... | .... | 1.3 | | Least prevalent wind, S. W. |
| 16 | .614 | .610 | .612 | 34.9 | 16.1 | 26.4 | .146 | .872 | W | 40.49 | 3.6 | .... | .... | 2.0 | | Most windy day the 24th day, mean miles per hour, 22.14. |
| 17 | .678 | .650 | .666 | 35.0 | 14.1 | 27.1 | .149 | .868 | N E | 120.34 | 7.6 | Inapp | .... | 2.0 | Rain. L. Halo | |
| 18 | .425 | .352 | 381 | 42.3 | 27.9 | 34.8 | .197 | .891 | S W | 77.01 | 8.6 | .... | .... | 2.3 | | Least windy day the 16th day, mean miles per hour, 1.68. |
| 19 | .700 | .530 | .636 | 29.1 | 11.2 | 21.7 | .122 | .882 | W | 379.14 | 1 3 | .025 | .... | 2.3 | Rain. | |
| 20 | .792 | .579 | .674 | 28.4 | 12.4 | 19.4 | .116 | .881 | N E | 162.00 | 6.6 | .... | Inapp | 2.6 | Snow. | Aurora Borealis visible 2 nights. |
| 21 | 30.046 | .837 | .960 | 30.8 | 2.1 | 15.9 | .102 | .869 | W | 89.02 | 3.3 | .... | .... | 1.3 | | Zodiacal light, bright. |
| 22 | .295 | 30.129 | 30.189 | 84.4 | 5.9 | 19.1 | .116 | .890 | N E | 163.50 | 3.3 | .... | Inapp | 2.6 | Snow. | Lunar Halo, 17th day. |
| 23 | .021 | 29.840 | 29.950 | 35.2 | 3.5 | 22.3 | .127 | .840 | S W | 133.80 | 4.0 | .... | .... | 1.3 | | |
| 24 | 29.802 | .697 | .756 | 52.3 | 18.4 | 35.8 | .222 | .865 | W | 731.40 | 0.6 | .... | .... | 2.3 | | |
| 25 | .900 | .741 | .820 | 49 9 | 20.4 | 35.7 | .216 | .890 | N E | 105.40 | 0.0 | .... | .... | 2.6 | | |
| 26 | .900 | .769 | .845 | 42.3 | 28.4 | 36.5 | .212 | .909 | N E | 152.19 | 3 3 | Inapp | .... | 2.6 | | |
| 27 | 30.046 | .961 | .995 | 47.0 | 36.4 | 43.0 | .267 | .913 | N E | 124.00 | 10.0 | .... | .... | 3.3 | | |
| 28 | .117 | 30.052 | 30.089 | 53 1 | 24.2 | 37.8 | .233 | .893 | N E | 167.41 | 0.0 | .... | .... | 2.0 | Aurora Bor. | |
| 29 | 29.973 | 29.850 | 29.911 | 54.7 | 21.4 | 38.3 | .233 | .866 | N E | 244.20 | 6.4 | .... | .... | 2.6 | | |
| 30 | .691 | .669 | .669 | 37.4 | 29.9 | 35.2 | .198 | .893 | N E | 294.56 | 10.0 | 0.191 | .... | 2.6 | Rain. | |
| 31 | .690 | .549 | .620 | 46.4 | 31.5 | 39.1 | .234 | .909 | N E | 235.55 | 8.6 | .... | .... | 3.0 | | |

# ABSTRACT OF METEOROLOGICAL OBSERVATIONS,

*Taken at the Montreal Observatory, Latitude* 45° 31′ *N. Longitude*, 4*h.* 54*m.* 11*s. W. of Greenwich. Height above the level of the Sea* 182 *feet. For the month of April*, 1864.

BY CHARLES SMALLWOOD, M.D., LL.D.

| Day of Month. | Reading of the Barometer, corrected, and reduced to 32° F. | | | Reading of Thermometer. | | | Mean Tension of Vapor. | Mean Humidity of the Atmosphere. | General direction of Wind. | Horizontal movement in 24 hours in miles. | Mean extent of Clouds in 10ths. | Depth of Rain in inches. | Depth of Snow in inches. | Ozone in 10ths. | Weather, &c. | Remarks for the Month. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Highest | Lowest. | Mean. | Max. | Min. | Mean | | | | | | | | | | |
| | Inches. | Inches. | Inches. | | | | | | | | | | | | | |
| 1 | 29.710 | 29.650 | 29.687 | 56.8 | 29.9 | 41.0 | .263 | .913 | N E | 265.85 | 7.6 | Inapp | .... | 3.0 | Rain. | |
| 2 | .720 | .673 | .703 | 49.7 | 31.7 | 40.5 | .245 | .915 | N E | 219.44 | 8.0 | 0.114 | .... | 4.0 | Rain. | |
| 3 | .942 | .882 | .908 | 51.1 | 34.3 | 41.0 | .244 | .894 | N E | 114.10 | 3.3 | .... | .... | 2.6 | Aurora Bor. | |
| 4 | .949 | .936 | .941 | 61.2 | 27.1 | 44.0 | .284 | .862 | N E | 115.10 | 1.8 | .... | .... | 1.3 | Aurora Bor. | |
| 5 | .969 | .902 | .940 | 51.4 | 25.0 | 40.4 | .246 | .884 | N | 189.81 | 0.0 | .... | .... | 1.6 | Aurora Bor. | |
| 6 | 30.047 | .998 | 30.028 | 51.1 | 32.0 | 48.9 | .340 | .876 | W bys | 85.19 | 1.3 | .... | .... | 2.3 | | |
| 7 | .064 | 30.021 | .045 | 59.6 | 35.1 | 52.6 | .379 | .881 | N | 66.41 | 0.0 | .... | .... | 2.0 | | |
| 8 | .035 | .010 | .019 | 59.8 | 34.1 | 43.6 | .271 | .873 | N | 127.39 | 3.3 | .... | .... | 1.3 | | |
| 9 | .120 | .000 | .047 | 58.8 | 28.9 | 43.2 | .271 | .874 | N | 265.41 | 1.3 | .... | .... | 1.0 | | |
| 10 | 29.932 | 29.869 | 29.899 | 40.1 | 37.4 | 39.6 | .228 | .912 | N E | 194.40 | 10.0 | Inapp | Inapp | 3.3 | Rain—Snow, | |
| 11 | .899 | .749 | .827 | 40.6 | 39.9 | 37.6 | .216 | .907 | N E | 297.18 | 10.0 | 0.213 | 1.90 | 4.0 | Rain—Snow. | |
| 12 | .920 | .825 | .877 | 40.1 | 32.4 | 36.8 | .212 | .922 | N E | 123.73 | 10.0 | 0.051 | 0.20 | 2.6 | Rain—Snow. | |
| 13 | .825 | .804 | .816 | 47.4 | 34.2 | 39.4 | .229 | .899 | N E | 136.00 | 10.0 | .... | .... | 2.6 | | |
| 14 | .761 | .770 | .767 | 46.1 | 31.1 | 40.2 | .238 | .888 | N E | 122.24 | 10.0 | .... | .... | 2.3 | | |
| 15 | .629 | .601 | .628 | 59.0 | 34.1 | 45.3 | .306 | .915 | W | 320.04 | 8.6 | .... | .... | 1.6 | | |
| 16 | .474 | .450 | .458 | 50.1 | 34.4 | 43 1 | .268 | .904 | W | 154.05 | 6.6 | .... | .... | 3.0 | Snow. | |
| 17 | .599 | .421 | .494 | 46.3 | 34.2 | 40.4 | .242 | .898 | W | 110.20 | 8.0 | .... | Inapp | 3.0 | Snow. | |
| 18 | .851 | .625 | .739 | 45.7 | 26.6 | 37.7 | .215 | .888 | W | 133.01 | 10.0 | Inapp | Inapp | 3.3 | Rain—Snow. | |
| 19 | .904 | .875 | .896 | 64.6 | 29.4 | 46.2 | .305 | .867 | N E | 199.86 | 4.0 | .... | Inapp | 3.0 | | |
| 20 | .883 | .800 | .851 | 52.4 | 29.2 | 43.4 | .281 | .898 | NE by E | 60.95 | 6.6 | .... | .... | 2.3 | Solar Halo— | |
| 21 | .913 | .820 | .861 | 68.2 | 34.7 | 51.8 | .340 | .866 | N E | 124.07 | 0.0 | .... | .... | 1.2 | Lunar Halo | |
| 22 | 30.011 | .932 | .975 | 75.0 | 32.0 | 52.0 | .369 | .815 | W bys | 51.42 | 0.0 | .... | .... | 1.0 | | |
| 23 | 29.851 | .780 | .814 | 44.3 | 39.6 | 41.6 | .257 | .920 | S W | 244.84 | 10.0 | 0.110 | .... | 3.0 | Rain. | |
| 24 | 30.041 | 30.024 | 30.032 | 66.0 | 38.4 | 51.3 | .361 | .864 | W | 309.72 | 0.0 | .... | .... | 1.3 | Bril. Au. Bor. | |
| 25 | 29.900 | 29.854 | 29.875 | 58.8 | 32.4 | 49.7 | .315 | .833 | N N E | 219.22 | 3.6 | 0.132 | .... | 1.3 | Rain. | |
| 26 | .769 | .539 | .616 | 55.0 | 46.0 | 50.4 | .345 | .865 | N E | 125.14 | 6.6 | 0.830 | .... | 3.0 | Rain Thund'r | |
| 27 | .614 | .545 | .585 | 53.3 | 46 9 | 50.1 | .319 | .869 | N E | 115.68 | 10.0 | 0.462 | .... | 3.3 | Rain. | |
| 28 | 30.035 | .769 | .911 | 42.2 | 33.1 | 38.8 | .231 | .909 | W | 151.54 | 10.0 | 0.148 | ... | 2.6 | Rain. | |
| 29 | .040 | .992 | 30.022 | 60.3 | 38.4 | 47.7 | .311 | .869 | W by N | 114.24 | 3.6 | Inapp | .... | 2.0 | Rain. | |
| 30 | 29.906 | .800 | 29.868 | 66.4 | 34.4 | 53.4 | .361 | .834 | N by W | 151.92 | 3.3 | .... | ..... | 2.3 | | |

Barometer.... Highest, the 9th day, 30.120 inches.
Lowest, the 17th day, 29.421 "
Monthly Mean, 29.765 "
Monthly Range, 0.699 "

Thermometer Highest, the 22nd day, 75° 0.
Lowest, the 5th day, -25° 0.
Monthly Mean, 44° 37.
Monthly Range, 50° 0.

Greatest intensity of the Sun's rays, 79° 0.
Lowest point of Terrestrial radiation, -20° 4.
Mean Humidity .883.
Rain fell on 12 days, amounting to 2.060 inches.
Snow fell on 6 days, amounting to 2.10 inches.
Most prevalent wind, N. E.
Least prevalent wind, S. W.
Most windy day the 15th day, mean miles per hour, 13.33.
Least windy day the 22nd day, mean miles per hour, 2.14.
Aurora Borealis visible on 4 nights.
Solar Halo on the 19th day.
Lunar Halo on the 19th day.
Thunder on the 26th day.

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Case of Traumatic Femoral Aneurism. Ligature, twenty-five days after the injury—death from Phlebitis thirty-four days after operation.* By FREDERICK ROBINSON, M.D., M.R.C.P. London, Surgeon, Scots Fusilier Guards.

The subject of this notice, a fine healthy young man, æt. 24, a corporal in the regiment, was admitted into hospital on the morning of August 25th, 1863. Whilst larking in the surgery with the hospital corporal, who was at the time engaged in cleaning an amputating knife, the former received a stab. The site of the injury was in the course of the great vessel, and about two inches below Poupart's ligament. The poor fellow was stated to have lost a considerable quantity of blood, and to have fainted before his unfortunate comrade, recovering his presence of mind, applied a compress of lint, and sent for a medical officer. The latter, Assistant Surgeon Baker, finding the hemorrhage completely arrested, did not disturb the dressings. It would appear that in the evening there was considerable tumefaction in the vicinity of the wound, but no oozing of blood from beneath the bandages. On the morning of the 3rd of September the outer dressings were removed, and a wound corresponding to the size of the knife, and containing a plug of lint, became visible. The adjacent parts were somewhat inflamed and tumefied. The plug of lint was allowed to remain, and a wet bandage applied. No hemorrhage experienced. On my assuming charge of the man on the morning of the 10th, and dressing the wound, its condition was as follows:—There was an oval ulcer about the size of a crown, containing in its centre a clot, apparently of recent formation. Healthy purulent discharge, tinged with blood, was secreted, and a good deal of thickening and redness of tissues adjacent to the wound was present; the results of inflammatory action set up in the

locality. Strong pulsation was imparted to the hand when placed over the ulcer, and a loud clear bruit was audible. There was diffused swelling, apparently blood in a fluid state. The general state of the patient was very satisfactory; no pyrexia, but some sleeplessness complained of.

Ordered water-dressing and a morphia pill at bed time. On the 8th the report in the case-book was as follows:

"There has been no hemorrhage—the clot plugging up the centre of the ulcer has dissolved, and being discharged, the latter looks healthy, and the swollen and inflamed tissues adjacent have subsided. The bruit however has increased in intensity—loud and characteristic. No numbness or coldness of extremity. General state of health satisfactory. Sleeps well without an opiate. No defined aneurismal tumor; contour of the limb almost natural, a little fuller perhaps than the other thigh; pressure to the artery above the pubis, by means of Signorini tourniquet, gradually tightened.

He continued to progress satisfactorily, as regards the state of the ulcer and his general health, until the morning of the 18th. During this period, however, the current of blood into the aneurism could not be materially controlled by pressure—the contents of the sac remaining, evidently fluid for the most part—and the swelling assuming a more convex form. The ulcer had contracted to the size of a sixpence. On the morning referred to, at about 8 o'clock, whilst reaching over the side of the bed, the patient experienced slight hemorrhage from the ulcer. On examination soon after, a small dark clot, the size of a pea, was found plugging up the centre of the ulcer. A very strong impulse imparted to the hand when placed over the locality.

No further hemorrhage took place, but the edges of the ulcer became everted and flabby, and the aneurismal sac gradally increased in size—extending inwards. On the morning of the 20th, pressure having been fairly tried and proved quite ineffectual in causing coagulation, it was determined to lay open the sac, and ligature the artery above and below the seat of injury. At 3 p. m. the patient being placed under the influence of chloroform, an incision was made through the centre of the aneurism, on a line with the course of the artery. A dark coagulum, the size of a walnut, plugged up the small ulcer, and on its removal, profuse arterial hemorrhage resulted. This was absolutely uncontrollable by pressure over the pubis—though most effectually rendered. The main artery bound down and imbedded in tissues, thickened considerably by adhesive inflammation, was found on the inner side of a large cul-de-sac capable of containing the closed fist, and from a large wound

in the vessel, the blood welled forth to a very serious extent. The difficulty in the way of the operator was necessarily considerable.* The hemorrhage being of alarming extent (threatening an immediately fatal issue), and pressure above the sac being wholly ineffectual, it was judged expedient to enlarge the wound upwards, and secure the common femoral just below Poupart's ligament. This proceeding was adopted, but it failed to diminish materially the loss of blood.

Only by pressing firmly two fingers over the lesion in the artery, could the hemorrhage be somewhat controlled. After some delay, the hand of an assistant being thus placed, the vessel was dissected out, and a ligature placed above and below its lesion. This was evidently longitudinal, and as far as could be judged, more than an inch in length. The patient was greatly exhausted, and stimulants were freely given. Three sutures were placed in the wound, the sides were drawn together by adhesive plaster, and wet lint applied to the surface; there was no bleeding subsequently. No difference in the temperature of the affected limb. A flannel roller was applied from the foot upwards. Some sickness and vomiting occurred within the first hour or so, but the nausea soon subsided. An opiate was ordered with good effect in the evening, and effervescing draughts of carb. of ammonia with hydrocyanic acid, with a little beef tea and jelly, freely administered at intervals. His progress from this time until the 24th was most satisfactory. The wound, at first rather foul and sloughy, cleansed, and rapidly took on healthy action, and the general condition of the patient became as favorable as could be desired. On the 24th, after passing a good night, he complained of a feeling of "soreness" in the right *iliac* fossa. Very little if any tenderness on pressure was experienced there, but some enlarged glands were felt in the locality, and the uneasiness was referred to them by the patient, rather than to a position more deep seated. The discharge on this day was, as it had been, thick and healthy. The wound on the whole was, healthy, the bottom of it however was still foul, though fast cleaning, each day granulations springing up. The same feeling of soreness and stiffness was casually mentioned by the patient, as being experienced down the adductors and the muscles of the leg. No swelling of the limb. The temperature had continued good, but no pulsation in the tibial arteries could be discovered then or subsequently, up to the date of the man's death—the heat however

* The writer feels under great obligations to Dr. Campbell, Prof. of Surgery in McGill College, and to Assistant Sugeons Turner, Scots Fusilier Guards, and Lawrence, Grenadier Guards, for their valuable assistance during this operation.

remaining of normal standard. He was ordered dec. of bark, with liq. ammonia acet. He slept well, but awoke about 4 o'clock on the 25th, experiencing a severe shooting pain, extending from the testicle to the right hypochondrium, and also across the latter. There were no rigors—or pyrexial symptoms.

Ordered poppy fomentations. The dressing to the wound from the outset was wet lint, and subsequently in addition chloric lotion. Decoction of bark thrice a day, wine, and nourishment in large quantity.

Report of 27th. The pain disappeared after the fomentations, and he continued free from abdominal uneasiness. The symptoms, both as regard his general state, and the wound, very favorable on the whole. In the case book, however, it was noted that the respiration was rather more frequent than normal, and accompanied by occasional sighing, as if from despondency on the part of the patient, who nevertheless spoke confidently as to his own amendment. The countenance pallid, and somewhat anxious in expression.

On the 29th the wound was making very fast progress, the ash-colored portion at the bottom almost replaced entirely by healthy granulations. A little mucous sputa tinged with blood was expectorated on the 2nd of Oct., and the respiration at the base of right lung was a little weak. The gums being blanched, and rather spongy, in the absence of more decided stethoscopic evidence of disease, it was supposed, from the man's explanation of the occurrence, that the bleeding might have come from the mouth. On this day he remarked that he felt pain, on coughing, in the region of the right spermatic cord. The appetite was indifferent; citrate of quinine and iron was substituted for the decoction of bark. He had been able previously to dispense with the opiate at night.

Oct. 3rd. Report stated that he passed an indifferent night, owing to a troublesome cough. Scanty mucous sputa; perspired somewhat; bowels a little loose; wound continues to heal favorably. Ordered cod liver oil, two drachms twice a day, and an antispasmodic mixture, containing prussic acid.

On the 4th the ligature from the lower end of artery came away.

On the 8th the report stated, that his progress during the previous days had not been satisfactory.

He had not experienced rigors, but the pulse was accelerated at night, and there was decided hectic, not however of an aggravated form, followed by copious perspiration. Some tendency to diarrhœa, but easily checked; the respiration somewhat tubular at the apices of lungs, dulness of lower two thirds of right side, and absence of respiratory murmur there; large moist crepitating râles in both lungs. Sputa of the same

character as before, and scanty. Appetite very poor, but he takes nourishment in sufficient quantity; tongue *perfectly clean and healthy in appearance.* No abdominal or inguinal pain. Pulse weak and frequent. On the evening of the 11th he had a distinct rigor, not long continued however; he had previously slept well. The last ligature came away this day; ulcer closing up. In every other respect his condition remained the same as at the previous date. Ordered syrup iodide of iron, a drachm twice a day.

On the 14th. No change of importance was noticed, except that a chronic abscess the size of an egg had formed on the sacrum, and had been opened.

On the 16th, report says, "another rigor experienced, lasting half an hour." In other respects as before. Chest symptoms much as before, not urgent. Wound rather pallid, and limb somewhat œdematous. From this date until his decease, on the morning of the 24th October, he became gradually worse, the more prominent symptoms being severe rigors followed by profuse perspiration and consequent exhaustion. The chest symptoms were not urgent, and owing to the great distress occasioned him when the shoulders were raised for the purpose of applying the stethoscope posteriorly, examination of this region was not made so frequently as could be desired. There were loud crepitant râles (pretty general,) on the 19th, the dulness having for the most part disappeared at the base of the lungs; and on the 21st some friction sounds were audible posteriorly on both sides. The ulcer then took on unhealthy action, the granulations became pale and flabby with dark sanious discharge. At the time of decease the sore was only about the size of a florin. The lower extremity became pale, œdematous, somewhat swollen and hard. The tongue retained its healthy appearance up to the 23rd, when it became brown and dry. There was very little diarrhœa. He expired, on the morning of the 24th October without suffering, rather suddenly, while an orderly was assisting to arrange his clothes.

His strength had been supported and life prolonged by large quantities of nourishment—beef tea, jelly, and wine, together with diffusible stimulants, acids and opium,—which he took very regularly, notwithstanding an absence of all desire, latterly, for food.

Post mortem examination fourteen hours after death. Both lungs adherent firmly to the parietes of chest by bands of lymph, some of recent formation; no effusion; structure of both lungs friable, portions of them impervious to air; the parenchyma presented appearances generally of recent inflammatory action of low congestive type; other parts of the viscera gorged with serum. Liver considerably enlarged,

somewhat congested. Spleen enlarged, congested, very friable. Kidneys normal. Circulatory system healthy; heart firm, polypi in the cavities; the coats of inferior vena cava were much thickened; and the inner surface lined with thick pus. The diseased condition extended down as far as the femoral artery, which, however, did not contain pus, but was plugged up with coagulæ. The artery had been wounded immediately below the profunda, and for a space of two inches (between the ligatured portion) the coats had been to a considerable extent absorbed, and the canal obliterated. The cicatrix of the large wound (occasioned by the operation) was firm and sound, an ulcer the size of a sixpence only remaining open.

REMARKS.—This case may be considered an instructive one in several points of view. That so large a wound in a vessel of such importance as the femoral artery should be completely controlled by pressure, and that no secondary hemorrhage took place, must be viewed as very unusual circumstances. Cases have been recorded in which small punctured wounds in the large arteries* have closed up for a longer or shorter space of time, and nature has effected a complete cure in some instances of lesion of the brachial artery. I am not aware, however, of any instance like the one under notice, and I presume such cases, if met with, must be very unfrequent.† The firm pressure employed at first was followed by phlegmonous inflammation of the skin and cellular tissues. Resulting from this general inflammatory action, the incision in the vessel may have in the first instance united. Subsequently yielding to the lateral pressure of the column of blood, the wound would reopen, and the ordinary evidences of false aneurism present themselves. Even then, however, the growth in size was much slower, and, up to the period of operation, the magnitude of the wound much less than might be anticipated. Certainly, however, it extended inwards to a considerable distance, absorbing the areolar tissues and glands.

1st. The insidious progress of blood-poisoning is well illustrated in the present case. This contingency was looked for from the outset, the wound being of large size, deep, in a locality, where the absorbents are especially active, and, moreover, the exhausted and debilitated state of the man predisposed him much to such disastrous sequence. Every preventive measure therefore, as regards air, cleanliness of wound, and diet, was carefully observed.

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* A case of wound of the abdominal aorta thus spontaneously closing up is on record.

† I have not the opportunity of searching the records of cases of this nature.

2d. The favorable progress of the wound, after the symptoms pointed to absorption of pus, is a rather noticeable feature in the case. Thus the operation was performed on the 20th September, and the symptoms of phlebitis set in on the 25th. Then an interval of apparent immunity from unfavorable symptoms is succeeded by evidences of insidious disease in the lung tissue and pleura, the ulcer meanwhile advancing most satisfactorily.

Not until Oct. 11th were distinct rigors observable, but yet the ulcer continued to heal as favorably as could be desired, up to the 16th. Thus only a few days before the poor fellow's death did the ulcer show evidence of the *diseased* state of the blood.

3. The healthy state of the tongue, absence of thirst, and even at the last, little tendency to diarrhœa were rather unusual features in the case; the characteristic, dry, red state of the former organ being absent throughout.

4. Lastly, may we not derive some practical lesson as to the mode of treatment in such cases? The description of the catastrophe, the profuse hemorrhage, and subsequent syncope, would point indubitably at the time of occurrence to a lesion of either the femoral or profunda artery, but the bleeding had ceased; and was entirely controlled before the man was seen by my colleague.

Under such circumstances should the dressing be removed, the vessel sought for and secured by ligature above and below the wound; or should the curative process of nature, so far advancing favorably, be afforded further trial?

No one, I presume, would assert that this latter course is at variance with the recognised rules and principles of surgery relative to wounded vessels, and, as I have remarked, cases, some of recent occurrence, give weight to such practice. My own views, however, are decidedly in favor of the first named mode of proceeding, and that, as a general rule, the employment of pressure as a curative means should be limited to vessels of no larger capacity than the radial and ulnar arteries.

The subject of this case was evidently of vigorous constitution, and the length of the interval elapsing after the secondary operation, and the almost entire cicatrization of the large wound, before decease, showed the reparative efforts his system was capable of putting forth, during the long protracted struggle between life and death.

*New and Important Therapeutic uses of Nux Vomica.* By S. C. SEWELL, M.D., L.R.C.S., EDIN., &c. &c., Ottawa; late Lecturer on Materia Medica and Clinical Medicine, McGill University.

In May, 1862, Miss M., aged 20, applied for advice for hordeolum. For four years she had not been a day free from styes, and her eyelashes had all dropped out. I ordered four minims of tr. of nux vomica to be taken in a drachm of water twice a day. A stye that was then coming on receded, and she has only had two or three since. The eyelashes in a short time began to sprout, and she has now long and perfect rows of them. She took the medicine for six weeks, and has since taken it for the same length of time twice.

15th August, 1862.—Miss D., aged 15, came under treatment for styes, which she had had continuously for two years. Six weeks of the same treatment effected a permanent cure. The stye she had on her eye at the time suppurated, but she has never had any since.

9th December, 1862.—Mrs. V. B., aged 20, applied for abscess which always formed in one or other of the labia pudendi, a day or two before or after the menstrual period. This had occurred every month for four years, and she had tried a great many physicians in vain. She had been five years married, and had had no children. Looking at her eyelids, I saw the marks of old styes, and asked whether she had had many of them. She replied, that from fourteen years old to sixteen she never was without them. I then enquired whether she had any since the abscesses had begun to form. She said "not one." I made up my mind that the abscesses were vicarious of the styes, and put her on six minims of tr. of nux vomica twice a day. Since then she has had only two abscesses, one six months and the other nine months after the treatment was commenced. I have since treated her for sterility, and she is now five months pregnant. I employed nux vomica as part of the treatment.

Cases of recent hordeolum yield as quickly as old ones to this treatment.

Miss D., who is not a resident of Ottawa, had been troubled with impetigo of the scalp for several years, which had baffled the medical men in her city. Under the use of this remedy, the skin disease soon began to mend, and then yielded speedily and permanently to local remedies. This led me to use it in cachectic or scrofulous cases of various skin diseases, with great benefit in many instances. Its use in habitual costiveness is well known to the profession, and need not be dilated on.

Reflecting on the therapeutic action of nux vomica, I came to the conclusion that it exerts its action on the ganglionic system of nerves, of

different kinds of functions, and that especial benefit is to be derived from its tonic or exciting influence over the nerves of nutrition; and I would remark, that wherever strychnine does good, nux vomica does better. Taking this view of its physiological action, I have tried it with satisfaction in dyspepsia dependent on defective innervation, strumous ophthalmia, &c., but my observations have not been continued long enough to make them of value to the profession. I have been induced to put my observations before my brethren, in the hope of inducing some to prosecute enquiries in the same direction, for I am sanguine enough to believe that we have here a most valuable remedy in a host of chronic diseases. In making the observations, it is most necessary to avoid that stumbling-block to all therapeutic enquiries *polypharmacy*. *Fas est et hoste doceri.* I came first to use nux vomica in this way. More than twenty years ago, Dr. Fisher, of Montreal, was eulogizing homœopathy to me, and instanced a case of inveterate stye that he had treated rapidly, successfully, and permanently by infinitesimal doses of nux vomica. When Miss M., case No. 1, presented herself, I said to myself, here is a case that has baffled some of the most eminent practitioners of New York and elsewhere for years, what can I do? While pondering on the subject, my conversation with Dr. Fisher, so many years before, flashed across my mind, and I instantly resolved to try it, as detailed. The success astonished me, and led me into a train of experiments (as I trust it will others) that promises great results for therapeutics. A word more and I have done. As a general rule, alterative medicines should not be given in large doses, but well diluted.

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*Cases of Paraplegia*, from the Prize Essay, session 1863-4, McGill University. By W. Wood Squire, A.M., M.D.

### Traumatic Paraplegia.

James Clancey, ætat. 24, a laborer, was working in a new building, as a hod carrier, on Nov. 27th, 1863, when the beam on which he was standing gave way, and he was precipitated from the third story to the cellar, hitting the ground in a sitting posture, and with his back thrown roughly against the side wall. He did not become unconscious. After he had been placed on an *ex-tempore* litter by his fellow-laborers, he was able to turn on his left side, raising the right leg over the left. Dr. F. W. Campbell was speedily in attendance, and I am indebted to his courtesy for an introduction to the case, while under his care.

When I saw the patient for the first time, about a week after the acci-

dent, I discovered no contusion or wounds on the head, neck, trunk or extremities, except the relic of an abrasion on the right temple, and a cicatrix left by a lacerated wound of the upper lip. There was no complaint of pain over the spine; no tenderness on pressure or percussion. The spinous processes of the eleventh and twelfth dorsal vertebræ are protruded several lines from their normal position, due to the fracture and probable impaction of their bodies. There is no lateral displacement and no apparent, or, *at least*, reducible dislocation. There is no feeling of ligation round the body at the site of injury. The right foot is slightly everted, but this distortion is attributed to a former accident.

Motion in both legs is completely lost, and sensation is seriously impaired. Immediately after the accident, anæsthesia was more marked in the left than in the right leg, but in four days the left leg rapidly improved, distancing its mate. The patient can now (Dec. 3rd, 1863,) distinguish readily

2 points at $2\frac{1}{2}$ inches distance on the left anterior thigh.
" " " $4\frac{1}{2}$ " " " " right " "
" " " $2\frac{1}{2}$ " " " " left fibular region.
" " " $6\frac{1}{4}$ " " " " right " "

The temperature in both popliteal regions is 98° F.—in the plantar aspects of both feet it is 92° F. No reflex motion can be induced in either extremity. There are no perversions of sensation; no spasm or rigidity of the affected muscles, nor any priapism. Constipation was very obstinate at first, but in eight days the dejections became involuntary. The bladder is completely paralysed, requiring the daily use of the catheter.

The pulse is 118, somewhat full and soft. The tongue is moist, coated with a brownish fur in the centre, but red at the tip and edges.

*Urine.* The urine of twenty-four hours is about thirty-six ounces and of specific gravity —1011. It is pale and opaline, of highly ammoniacal odor, strongly alkaline reaction, and thickened with ropy mucus. A filmy pellicle of uric acid forms upon its surface, giving an iridescent play of colors at different angles of reflected light. It is affected very slightly by heat—the urates disappearing over the spirit lamp,—but nitric acid rapidly clears it.

A heavy sediment is deposited on standing a few hours, composed of phosphates with entangled mucus aud epithelium. A portion of this deposit exhibited under the microscope, amorphous phosphate of lime, and beautiful transparent triangular prisms of the neutral triple phos-

phate, with their terminal edges bevelled off into facets. Mucus corpuscles were in abundance. A solution of pernitrate of iron produced a heavy precipitate of the phosphates. I am aware of the seeming contradiction of uric acid being precipitated in urine with these characters, especially when its natural solvents, the alkaline phosphates, are in such excess; but the chlorhydric acid test corroborated an anomaly which I do not pretend to explain.

Clancey was ordered, by Dr. F. W. Campbell, to have oxide of zinc ointment applied to the parts irritated by the dribbling of the acrid urine; and to take the $\frac{1}{20}$th of a grain of strychnine, and three grains of iodide of potassium three times a day.

December 12th. To-day the patient was admitted to the Montreal General Hospital at the request of Dr. Campbell, and placed under the care of Dr. McCallum.

The flexor muscles of the thigh have regained much of their power, and the vastus internus in the right thigh has quite recovered its integrity; but the muscles of the legs and feet are still completely paralysed. Bed-sores have formed over the sacrum, but they are yielding to lead-plaster and the Edinburgh red wash.

Sensation is improving, *pari passu*, in both legs. Evacuations can be procured, only at long intervals, by soap enemata aided by croton oil. The urine remains unaltered up to date. The strychnia has been reduced to grain $\frac{1}{30}$th three times a day. There has been a great deal of pain in the left leg, which is more wasted than the right; both ancles are œdematous, and very painful spasms in the paralysed muscles are now of frequent occurrence. General health has suffered but little.

Feb. 1st., 1864. Motion has *slightly* and sensation *decidedly* improved, but there is no power over any of the muscles below the knee in either leg. Patient can detect the pressure of

2 points at 3 inches distance on the right fibular region.
" " " $2\frac{1}{2}$ " " " " left " "
" " " 3 " " " " right outer thigh.
" " " $1\frac{1}{2}$ " " " " " inner "
" " " $1\frac{1}{2}$ " " " " left thigh { both sides the same.

Electric contractility and excito-motor action, are annihilated in both legs. Patient is slowly emaciating, and both legs are wasting. The patient was removed in May to his residence, where he continues in much the same state.

*Cause.* The injury may be ascribed to the probable rupture of some

of the small blood vessels of the cord at the seat of fracture. The extravasated blood has gravitated to the lower part of the spinal cord, pressing upon it near the cauda equina, and thus destroying all reflex mobility in the parts supplied by nerves which arise from the spinal cord below this point; and thus too, a low form of myelitis has been set up, perpetuating the mischief.

### Hysterical Paraplegia.

Eliza Duff, ætat. 35, married, was admitted into the Montreal General Hospital, June 9th, 1863, under the care of Dr. Reddy.—Family health was good; but one of her sisters, after the birth of her last child, was very subject to hysteria. This sister had always been troubled with strongly-marked anomalous symptoms of it, but she now remained bed-ridden, imagining she could not walk, and died in ten weeks after delivery. The strong hysterical diathesis of our patient was not controlled even by her invigorating employment of farm laborer, and it was intensified by marriage. Temperate, and with excellent general powers, she has yet been habituated to the use of quack medicines for many imaginary disorders. Her catamenia appeared at 14, and there has been no evidence of any irregularity; she has had six children, four were births at full term, two were miscarriages. The first premature birth was at five months—the last at three months, and occurred in June 1862. Her first and third living children were delivered by the forceps; there was great soreness after each operation, but no evidence could be discovered of laceration, or of any lesion of the nerves from pressure of the head.

Five weeks after the birth of her first child, twelve years ago, patient suffered from mammary abscess, followed speedily by trembling and great weakness of the legs when she attempted to stand. She recovered in a few months, but two weeks after the birth of her second child, she was seized with lumbar pains, and her right foot dragged. The disease gradually advanced; but, from the badness of her memory, I could not obtain the sequence or progress of the symptoms. Three years ago she could walk with a chair; but in a few months it failed to afford her any assistance. Three months since, a burning sensation began in both calves, and passed down to the soles of the feet, where it seemed to concentrate. It was accompanied by various anomalous sensations: thus, the patient would sometimes take off her shoes to see if her feet were burned. At the same time too, she found it difficult to micturate; but did not require the use of the catheter till after her admission. There is no pain on pressing or percussing the spinous process, nor on any dorsal

movements. The application of the hot sponge and ice conclusively proved the absence of any inflammatory lesion of the cord. No bulging or undue prominence of any of the vertebræ can be distinguished. Both legs have completely lost the power of motion, but there is no anæsthesia. Tickling the soles of her feet with a feather, and the insertion of the galvanic needles in the dorsa of the feet, produced considerable excito-motor action; but not more than her temperament or diathesis would naturally account for. There is paralysis of the sphincters of the bladder and rectum. She knows when she requires to defecate, but not when the act is accomplished. Her intellectual faculties are impaired, particularly memory. The woman is strongly built and plump; her heart and lungs in healthy play; skin harsh and dry; general nutrition good; of hopeful spirit. Pulse 104:--respiration 32. Saliva acid.

*Urine.* Her urine is strongly acid, and of very high specific gravity. She passes about 24 oz. in 18 hours,—pale, clear, very little deposit on standing;—becomes turbid in a few hours. Suspecting sugar, I applied the excellent tests of Horsley, Maumene, and Botager, but without detecting a trace. The urates are in large excess. Quantities of acicular crystals of nitrate of urea are readily obtained by the addition of nitric acid, but I failed to obtain uric acid. On evaporation, granular urates of soda and ammonia in irregular spherical masses were seen under the microscope.

*Treatment.* The patient was placed by Dr. Reddy on strychnia, and then on the tincture of the muriate of iron without benefit. *Galvanism* succeeded, more rapidly than is its wont, in winning back volitional power to the legs, and the firm and judicious management of the house-surgeon, Dr. Drake, secured the improvement. Up to June 20, 1863, I had passed the catheter daily; but now, simultaneously with the return of motion to the legs, micturition became free, quite suddenly. She left the hospital the same day, and in a few days had perfectly and rapidly recovered.

*Remarks.* These two cases have been thrown together to contrast the striking differences between hysterical paraplegia and paraplegia from myelitis. The former is described by Brown-Sèquard, as a Reflex paralysis; and doubtless in many cases, possibly in the one now before us, it has had its origin in some irritation of the uterus or its appendages. Sèquard however, admits the possibility of a purely hysterical paralysis, ascribing it, with Sir. B. Brodie, to a paralysis of volition, rather than to any true loss of mobility. There are two modes, then, in which hysterical paraplegia may arise: I. The emotional dominating the intellectual faculties, and producing a suspension of will. II. Reflex irritation of the uterine system. Analysing the illustrative cases before us, we find

the following diagnostic marks of hysterical paraplegia:—I. The family history. II. The well marked hysterical diathesis. III. The absence of important paraplegic symptoms,—as wasting, alterations of the urine and of nutrition, and other signs of an irritative lesion of the cord. IV. The anomalies presented: such as the incompleteness of the paralysis, and the fact in the case of our patient, that more than once she has freely moved her limbs when her will was stimulated to action. Again, muscular resistance was distinctly encountered when her legs were roughly handled;—the electric excitability of her muscles was natural;—and lastly, her recovery was sudden, perfect and spontaneous.

## HOSPITAL REPORTS.

*Œdema of the Glottis: Operation of Laryngotomy at the Montreal General Hospital.* Reported by Mr. HAYES.

John Foley, aged 30, laborer, was admitted into the Montreal General Hospital late in the evening of 6th July, 1864, in a state of suffocation. He was unable to speak more than two or three words at a time, as the effort increased the difficulty. Any attempt at swallowing provoked a violent paroxysm of choking, and the fluid was instantly returned through the nostrils. His pulse was rapid and weak, surface cold, covered with sweat, and the lips livid. He was extremely restless, throwing his arms and body about in such a manner as to make it necessary to restrain him by gentle force. On examination, the soft palate and uvula were found to be slightly reddened and very œdematous,—the latter the size of a man's thumb. The tonsils also appeared considerably enlarged. The epiglottis could just be seen very red, but the man's struggling prevented a good view being obtained of the back of the pharynx. The tonsils and surrounding parts were at once freely scarified and the enlarged uvula removed by a pair of scissors. The bleeding, which was very free, was encouraged by warm fomentations of water. For a few minutes some relief seemed to have been derived, and an unsuccessful attempt was made to administer an emetic of vin ipecac. In a very short time, however, the symptoms of dyspnœa returned with increased violence, the poor fellow clutching wildly at his throat, and fell back on the bed, making convulsive struggles to breathe. As the symptoms plainly admitted of no delay or trifling, an opening was made through the integument, between the lower border of the thyroid cartilage and the ring of the cricoid. The membrane was pierced, and

a tube inserted. The usual alarming symptoms followed the introduction of the tube, but in a few seconds a quantity of mucus was expelled by coughing, and the man breathed freely through the new opening. No bleeding followed the incision. A sponge moistened constantly with warm water was retained by a muslin handkerchief over the orifice of the tube all night. About two hours after the operation, the upper part of the larynx was brushed with a 30 gr. solution of nitrate of silver. He was very weak during the night, and quite unable to swallow, every attempt being attended with a violent fit of coughing.

*July 7th.* Has slept a little, and can swallow much better. He expresses himself so much relieved, that at noon the attending physician deemed it unnecessary to keep the tube in longer. It was accordingly removed, and the wound closed by a piece of plaster. Nourishing liquid diet and an astringent gargle were ordered. From this date the man rapidly improved, and in three days after was allowed to rise. He made a complete recovery.

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## REVIEWS AND NOTICES OF BOOKS.

*Treatment of Diseases of the Skin.* By WILLIAM FRAZER, M.D., Lecturer on Materia Medica at the Carmichael School. Dublin; Fannin & Co., 1864. Pp. 174.

We have to thank our friend Dr. Frazer for forwarding to us a copy of the above very interesting practical little work from his pen. We have perused it with much pleasure, and we can faithfully add, much profit. Not pretentious either in the style of the writing or in its appearance, our author conveys in short and concise language all that is of real value for the practitioner to know concerning the pathology and treatment of skin diseases. It is a thoroughly therapeutical work, the various remedies used in the management of cutaneous diseases being divided into fourteen chapters, and the diseases in which each are employed, faithfully considered. Thus we have a chapter on Fowler's solution, on mercurials, on the preparation of arsenic, on cod liver oil, and many others.

With reference to sarsaparilla, Dr. Frazer entertains the opinion, which is now becoming very general, and of which the foremost advocate is Mr. Syme, that it is thoroughly inert. At page 24 he says, "I certainly never saw any decided results from it, as usually given. In former times, when this decoction was taken warm and in large quantity, and

continued diaphoresis promoted by various means, it may have been more serviceable than at present, when I believe its medical value is about equal to a cup of cold tea."

Dr. Fraser shows conclusively he has devoted great care and study to the subject of skin diseases, and we can cordially recommend his little work to the notice of our readers.

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*The University Medical and Surgical Journal of Philadelphia*, July, 1864.

We have received the first number of the above Journal edited, by Drs. Longshore, Lukens, and Murphy. It seems to stand a good deal upon its professions of independence, and advocates the admission of females as medical practitioners; this number containing an article on "a case of lingering labor by Sarah Caldwell, M.D.," which case gives the strongest possible evidence against their being so employed. The female whose case is related was seized with labor pains (*primipara*) at 5 o'clock in the evening of Monday; her regular attendant being called in on Tuesday morning. The pains at first appear to have been slight, and 24 hours from the commencement of labor she had made little progress. She was then informed that instruments would have to be employed, but the time for using them had not arrived. He then left, leaving instructions to send for him should the pains increase in severity. Annoyed at being thus left, her medical attendant was dismissed, and early in the morning of Wednesday this female physician was called in. According to her statement the pains were very strong and regular, and on examining "she found the head engaging the superior strait." She appears however to have allowed this unfortunate female to continue in this condition, doing nothing for her relief till Thursday morning, when "the pains *still continuing strong and regular, and the head not advancing*," she sent for a physician. By his directions, belladonna was smeared over the os, which was found in a rigid and unyielding condition, and it very soon completely dilated, but owing to the woman's exhaustion, the pains died away. Ergot was given, with some slight evidence of increase of power, and "the inner side of the os uteri," was titillated, and about five o'clock the child was born, without the aid of instruments. The child was apparently lifeless, but constant efforts at resuscitation being continued, they proved successful. The duration of labor was seventy-two hours. We never read a case more illustrative of the utter impossibility of females becoming thorough physicians and accoucheurs. Had the woman's original medical attendant been left in charge of the

case, labor would doubtless have been brought safely through in thirty-six or forty-eight hours at farthest; but to allow a female in labor, who after being a day and a half in that condition with a rigid os uteri, and strong pains, to remain for twenty-eight hours more without employing any means to attempt relief, is, to say the least, saying little for the professional forethought of Sarah Caldwell, M.D. What did she do to relieve this rigid os uteri? Absolutely nothing. Where was her tartar emetic or her lancet? Did it never strike her it was her duty to employ either of the above, in the attempt to relieve the obstacle to delivery? We are loathe to criticise so severely a case published in a new journal, but the question of female physicians is one of such great importance that such treatment by a female M.D. is, we think, deserving of severe condemnation. Woman appears to advantage in the sick room as the nurse and counsellor, but she is not fitted by nature to combat with the innumerable difficulties which constantly crowd before the medical man in his practice either as a physician, surgeon, or accoucheur. As a rule she can never command the self-possession which of right belongs to the sterner sex, and where, would we ask, is self-possession more often demanded, than in conducting the accouchments of *primipara?* We hope our new contemporary will be pecuniarily successful, but we cannot wish it success in its attempt to advocate the cause of female physicians, a movement which we think is founded in error, and which experience is daily proving the sex are incapable of honorably filling.

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*The Natural Laws of Husbandry.* By JUSTUS VON LIEBIG. Edited by JOHN BLYTH, M.D., Professor of Chemistry in Queen's College, Cork. New York: D. Appleton & Co., 443 and 445 Broadway. 1863. 8vo. pp. 388.

The science of agriculture is one of all-absorbing interest. In studying the laws which govern the growth and healthy development of the plant, we cannot separate therefrom the due consideration of the means of restoring the exhausted powers of the earth. Baron Liebig has given in this work his views on the subject, after a series of experiments extending over years of research. He says:

"Under the dominion of tradition and of slavish submission to authority, the practical man has lost the faculty of forming a right conception of the facts which daily pass before his eyes, and in the end can no longer distinguish facts from opinions. Hence, when science rejects *his explanations of any particular facts*, it is asserted that *the facts are themselves denied.* If science declares that we have made progress in

substituting for deficient farm-yard manure its active ingredients, or that superphosphate of lime is no special manure for turnips nor ammonia for corn, it is imagined that the utility of these substances is contested."

In the first chapter is considered the formation of the roots of plants, and of their power in selecting food by absorption of the mineral matters of the earth. The second chapter takes up the consideration of the nature of the soil and sub-soil, and of the best method of restoring the chemical constituents of the food necessary for succeeding crops, as by mechanical means and the use of manures, rotation of crops, its influence on the quality of the soil, beneficial results of drainage, &c. In the third chapter is considered the action of the soil and subsoil in effecting certain chemical changes, a system of preparation, so to speak, of the plant-food, on the abundant or scanty supply of which will depend the fertility or sterility of the soil. The remainder of the work is devoted to the consideration of manures, and the agricultural value of various chemical compounds, such as earthy phosphates, wood-ash, ammonia and nitric acid, salts of soda, ammonia, and lime. In concluding the notice of this eminently practical work, we cannot forego the suggestion to our various agricultural societies, of causing to be delivered, in a plain homely way, a series of lectures on the subject of practical husbandry, which we think would do more to benefit our young country and lessen the statements so frequently put forth of farms worn out and valueless. Soon would the benefit become apparent in increased crops and wealth to the farmer. Illustrating by public lectures the benefit of allowing to live our warbler and insectivora tribes of birds, would do more to attain the desired end, than the most stringent legislative enactments. The general impression with the farming community is, that the feathered tribes are a curse, feeding on the growing crops. Such anecdotes as the one lately published of some 1800 weevils being found in the stomach of one of these little birds, with three damaged wheat grains, would add to the interest and vary the monotony of a dry agricultural lecture.

Many facts of this nature could be brought out, and much benefit, we have no doubt, accrue therefrom.

## CORRESPONDENCE.

*To the Editors of the Canada Medical Journal.*

MM. EDITORS.—Be pleased to allow me a short space in your *Medical Journal* for a few remarks on the bearing of two operations for the cure

of aneurism, decided upon, the one by Dr. Campbell and the other by Dr. Hingston.

With regard to the first operation (ligature of the external iliac artery) by Dr. Campbell, I feel pleased to acknowledge—in accordance with his concise and methodical teaching—the practical ability of the oldest professor of surgery in Montreal. Thanks to his reporter, it would be difficult to find any thing to modify in the *procédé* to be followed in such delicate capital operations.

Of the second (ligature of the femoral artery, by Dr. Hingston), the report shows that it has been well performed, *secundum artem et seriatim.*

Both cases have terminated fatally, in a few weeks, principally on account of absorption of pus.

Such unsuccesful *capital* operations, faithfully recorded, should have even more credit with the profession than favorable ones, in as much as they call for serious reflection, to arrive at more precise *data* with regard to their value in the cure of diseases, or accidents, more or less at present or to be, under our control.

If your time is not too much tasked, I will ask you for an answer to a few queries in your next number.

1. Am I wrong in my belief that ligatures upon large arteries for aneurism will be successful but once in five cases, even at the present time; putting out of the question, that of the aorta, internal iliac, innominata and common carotid?

2. Has pyæmia been less frequently observed formerly than it is now; and is an epidemic of pyæmia possible, from deleterious influence of the air?

3. Could we account, at a certain rate, for nonsuccess in operations, by the conjuncture that, for two years at least, eczema of all types, and this year, scarlatina, small-pox, rubeola, typhoid fever, &c., have been the prevalent diseases, and have clearly shown an epidemic constitution of the atmosphere?

4. Will not epidemics, of all kinds transform and fuse themselves, in a protean way, so as to put patients for and after operations (specially in hospitals), in a precarious position, *ceteris paribus?*

5. Notwithsanding the unavoidable interference of the practical surgeon in these two cases, are not the consequences such as to forcibly direct the mind of all sincere lovers of medical and surgical science and art, to work in the path of the great men who have so much contributed lately to the success of *conservative surgery?*

Before leaving you, let me say to my friend Dr. Hingston, that he is

not correct in entitling himself physician to *l'Hôpital Ste. Famille*, nor to *The St. Patrick's Hospital.*

The oldest hospital in this country, *l'Hotel-Dieu*, will never change its name, but it is now situate at *Mont Ste. Famille.*

With my best wishes for the success, of your journal,

I am truly your confrère, J. G. BIBAUD, M.D.
*Pres. and Prof. Anatomy, Sch. M. and S. M.,*
*One of the Physicians of the Hôtel-Dieu.*

In reply to the queries put us by Dr. Bibaud, we would state, that ligature of large arteries is by no means so fatal an operation as the Doctor supposes. According to Crisp, who has tabulated 256 cases, the mortality was about 22 per cent. Porter gives the result of 600 cases, the mortality being 27 per cent. Pyæmia has been recognized for centuries as a cause of want of success in surgical operations, probably not under the above designation, but still it was the same disease. To read the history of aneurism by the older surgeons, when they invariably used to cut into the sac and ligature the artery above and below the aneurism, after passing a probe up and down the vessel, to serve as a guide to its situation, we cannot wonder that the cases were almost invariably fatal. To the third and fourth questions much difference of opinion obtains. We are, however, inclined to the belief that, during the prevalence of epidemics, operative interference is very liable to be followed by many accidents, unquestionably due to a vitiated state of the atmosphere. And here we might remark, *en passant*, that the system of general hospitals is by no means a good one. Surgical cases, we think, should be placed in a building, separate and distinct, where there is no chance of their coming in contact with patients suffering from erysipelas, fever, gangrene, *et id genus omnes.*

There can be no question about the absolute necessity of all true lovers of the surgical art following the footsteps of their predecessors in the way of conservative surgery. The cases, however, which are here referred to were of that nature that no other thing could be done but to operate, unless indeed they had been left to nature, when we need not have expected a spontaneous cure, except by special miracle.

We must correct the impression that Dr. Hingston is in any way responsible for having changed the name of the Hôtel Dieu in the heading of the article in question. We ourselves made the alteration, as well as styled the doctor "physician to the," &c. It is not customary with British physicians to prefix "one of the," as it is understood that all hospitals possess a staff of medical men who are all on an equal footing.—EDS.

# PERISCOPIC DEPARTMENT.

## Surgery.

### ON A CASE OF FEMORAL ANEURISM SUCESSFULLY TREATED BY LIGATURE OF THE EXTERNAL ILIAC.

By W. H. Folker, Esq., F.R.C.S.

Sampson I——, a laborer aged sixty-five, residing at Tunstall, was admitted into the North Staffordshire Infirmary, under my care, on the 18th of December, 1863, with femoral aneurism of the left side. According to the patient's own account his general health has always been good, except that during the last two years he has had occasional attacks of rheumatism. A little more than two months before his admission he perceived a small swelling about the size of a marble just below the left groin, which soon began to increase rapidly. He showed it to a surgeon, who ordered cold applications and rest. After that he went into the workhouse, and the surgeon there ordered confinement to bed and cold applications, from which time it ceased to increase so rapidly; still, however, it kept enlarging. Although accustomed to hard work and lifting heavy weights, he never remembers having strained or hurt himself in any way.

The patient, who is a tall and well-proportioned man, appeared on admission to be in good health; his tongue was clean, his bowels regular, pulse 76, and appetite good. On the left side he had a pulsating tumor, almost round in shape, extending from Poupart's ligament to about four inches down the thigh. The bruit characteristic of an aneurism was distinctly heard with the stethoscope; and the pulsation, which was strong and corresponded to the pulse, was easily controlled by pressing the artery above the tumor. There was no tenderness over the tumor, but an occasional aching pain was felt down the thigh.

As the treatment that had been adopted had only retarded the growth of the tumor, but had not stopped it, and as there was no possibility of applying continued pressure, it was determined to apply a ligature to the external iliac artery. Accordingly on Dec. 19th the operation was performed in the following manner: The patient being brought under the influence of chloroform, a semilunar incision about three or four inches long was made, commencing about an inch in front of the anterior superior spinous process of the ilium, and running nearly parallel to Poupart's ligament, dividing the skin and superficial fascia, and bringing into view the aponeurosis of the external oblique; this was cut through, the sper-

matic cord pushed aside, and the fascia transversalis divided on a director. The peritoneum was gently pressed up, and the sheath of the vessels exposed; this was very carefully opened with a silver scalpel, and a strong hemp ligature was passed with an aneurism needle from within outwards. The parts were now carefully examined to ascertain that nothing was included in the ligature which ought not to be tied; pressure also was made on the artery to see if it perfectly controlled pulsation in the tumor: and finding everything as it should be, the artery was then firmly tied. The wound was closed with three silver wire sutures, the patient taken to bed, and the limb enveloped in cotton wool, The operation was performed between twelve and one o'clock.—Three p.m.: The thigh warm, but the leg cold from the knee downwards; the wound smarts, but otherwise is not uncomfortable. To take milk, barley-water tea, or gruel, as he fancies—Half-past ten p.m.: The leg somewhat warmer, but feel numbed to the patient; he nevertheless is pretty comfortable, and thinks he shall be able to sleep without an opiate.

Dec. 20th.—Has passed a good night without any opiate, and is free from pain; the feeling of numbness has gone, and sensation is now quite natural. Pulse 80; tongue clean; skin moist; warmth in the limb about the same. The limb not to be disturbed; hot bottles, in addition to the cotton wool, to be applied if necessary. To have low diet and no medicine.

21st.—Has slept well. Pulse 80; tongue clean; lips dry; skin moist. Does not complain of thirst. Leg warmer. Says he feels much more comfortable than before the operation. No change in diet or dressings.

22nd.—Going on well in every respect. To have an egg and some beef-tea added to his diet.

24th.—Progressing very favorably; the wound looks healthy, and is healing rapidly. Tongue moist and clean; skin natural; countenance cheerful. Complains of being very hungry, but no alteration was made in his diet.

Daily reports contain nothing worthy of note till Jan. 7th, when the ligature came away. This is the nineteenth day from the operation. The wound has healed, excepting just round the exit of the ligature. To be lightly dressed with water dressing. The patient was directed to maintain the most perfect quiet, not even turning in bed more than he was absolutely obliged.

Jan. 8th.—Complains of being very thirsty; tongue rather dry; bowels not open. The tumor feels uneasy. To have a draught of the house mixture.

10th.—Very feverish and restless; tumor feels painful, and has a blush upon it. He has had a shivering fit. Tongue furred and dry.

Ordered to take effervescing saline mixture every four hours; to have a poultice applied over the tumor; and to take ten grains of Dover's powder at bedtime.

11th.—Tumor looks more inflamed and swollen. He is very feverish; tongue dry: bowels not open. To repeat the mixture and powder, and have an aperient draught.

12th.—Slept rather better for his powder last night, and feels easier this morning—not nearly so feverish. Bowels open; tongue more moist. Suppuration has taken place in the tumor. To repeat the mixture and powder at bedtime.

13th.—Passed a good night, and looks much better. Tongue moist, but white; skin natural; fluctuation very distinct in the tumor.

14th.—Better: tongue moist, though still a little white; skin natural; bowels open; urine scanty, high-colored, and thick; has a slight cough; appetite much better. To continue a poultice to the tumor. Ordered a draught containing bicarbonate of potash and infusion of orange-peel, three times a day, and six grains of Dover's powder and four grains of mercury with chalk at night. Another egg and a mutton chop to be added to his diet.

23rd.—The tumor, which had been pointing for the last day or two, broke this morning, and discharged some very offensive matter. To poultice the tumor and take five grains of Dover's powder every night, and continue the mixture for a few days.

Feb. 16th.—Has progressed steadily, and the discharge is much less; feels very weak. A small sinus which had formed, was laid open. To have quinine mixture and a pint of porter. Has not taken his powders for some nights.

March 12th.—Still very weak; tongue clean and moist; bowels regular and appetite good. The wound has filled up nicely with granulations, but still does not heal. No sinus discovered on examination with a probe. Ordered to sit up. Wound to be dressed with tincture of benzoin. Cod liver oil to be taken twice a day.

16th.—He has a slight attack of rheumatism. To discontinue the oil, tonic, and porter, and take instead the following draught every four hours—Nitrate of potash, ten grains; iodide of potassium, four grains; colchicum wine, ten minims; camphor water, one ounce. To keep in bed.

18th.—Much better in every respect. To get up; leave off his medicine, and take cod-liver oil again. Full diet and porter.

From this time he improved rapidly. He walked out in the infirmary grounds on the following day, and on the 24th was discharged cured.

Ligature of the external iliac is an operation that has now been performed

many times with rather a large proportion of successful cases; still however, it is an operation of considerable importance, and cases as they occur deserve to be placed on record. In this case suppuration took place in the sac. This is a dangerous symptom, and in several of the fatal cases that have occurred has been the immediate cause of death. If suppuration is diffused, or shows any tendency to burrow amongst the surounding muscles or cellular tissue, free incisions would be necessary; but where it is circumscribed I think it is decidedly preferable to allow it to take its course—point and break; of course carefully watching the progress of the case.—*Lancet.*

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## CASE OF ANEURISM OF THE ABDOMINAL AORTA, CURED BY COMPRESSION OF THE ARTERY IMMEDIATELY ABOVE THE TUMOR.

By D. W. Murray, of Newcastle.

The patient is a spare man, aged 26 years. His occupation as a pavior has required him to use a large wooden rammer for driving paving stones into the ground. Often in making strenuous exertions he has overreached himself, and subjected the trunk of his body to severe straining. Eleven months ago, after hard work, he was seized with severe pain in the back. Two months later the same pain began to be felt in the abdomen, catching his breath, and was very severe. About two months ago he began to feel a beating in his belly, and shortly afterwards became a patient at the Newcastle-on-Tyne Dispensary under Dr. Wm. Murray, who after a few examinations became convinced that he had an aneurism of the abdominal aorta. This opinion was shared by the medical officer of the dispensary. The following is the condition of the patient previous to the treatment:—His abdomen is somewhat spare, so that a distinct pulsation can be seen opposite the umbilicus. On applying the hand, a hard and somewhat movable tumor, of a distinctly globular form, is to be felt. It pulsates very strongly, and the pulsations impinge upon the hand with a sudden stroke; and the expansion of the tumor very distinctly separates the hands when applied to it. The tumor is of about the size of a large orange; when "the pressure" is made on the aorta above it, all pulsation ceases, and when it is removed a distinct thrill is felt to accompany the rush of blood into the tumor. A slight bruit is heard over the tumor. (A line drawn across the abdomen over the umbilicus touches at either end the margin of the last rib, and encloses between the free borders of the ribs a triangular space—the epigastric region. Over the left half of this space there is just room enough above the tumor to compress the aorta against the spine.) The aorta below

the tumor can be felt, and its pulsations seem in no way to depart from their normal characters. Bowels slightly constipated. Pulse good and normal. General health good; but he is worn out with pain and consequent loss of sleep. No evidence of degeneration of arterial system. "All palliative treatment having failed to relieve him, I proposed to apply a tourniquet (an ordinary horseshoe tourniquet) above the aneurism, and thus attempt to cure by compression. It happened, as I have before shown, that the aorta could be compressed above the tumour; and this was most completely accomplished by the tourniquet, one blade of which was applied over the spine and the other over the spot above indicated. Having taken my patient to the Northumberland and Durham Medical Society, I obtained there, from the President (Dr. Heath), and others, ample confirmation of my diagnosis; at the same time I proposed my plan of treatment. On Saturday, April 16th, the patient was put under the influence of chloroform, and pressure, by means of the tourniquet, kept up for two hours. On removing the pressure, no apparent effect had been produced. The pressure completely commanded pulsation in the tumor, except during occasional momentary displacement of the instrument. After an urgent entreaty on my part, the patient again submitted to the treatment on Tuesday, April 19th. After careful re-examination by Dr. Heath and myself, it was concluded once more that there could be no reasonable doubt of the nature of the disease. The pressure was again used and maintained, with but momentary intermission when the instrument became displaced, but even these were avoided during the last hour, as I carefully held the instrument in its place, and had the patient very fully under the influence of chloroform. After about five hours the pressure was removed, and its removal showed that now very little pulsation existed in the tumor. Beyond a little shivering and numbness, with coldness of the feet and legs, nothing of an untoward nature followed. In the evening, after a most careful examination, I failed to detect the slightest pulsation in the tumor or in the aorta below it."

On the 20th of April the patient was restless and sore; the legs feel numb, with a sensation of pins-and-needles in the feet. In consultation with Dr. Heath, the following observations were made and confirmed by that gentleman: "There is no pulsation in the tumor, which is now perfectly stationary, hard, resistant, and lessened in size; nor are any pulsations to be felt in the aorta below the tumor, in the iliacs, or femoral arteries." 21st: The patient is much better. He says "he is more free from pain that he has been for several months." No pulsation in the tumor or femoral. The pulses can be felt at one or two points

in the abdominal walls. 22nd: With Mr. Lightfoot, who carefully examined the case, the following points were made out, and verified by that gentleman:—"A solid hard tumor, of about the size of an apple, lying to the left of the umbilicus, can be felt,and, during deep expiration, can be seen. It is motionless to the eye, and, by the hand, the slightest possible forward movement can be distinguished at its upper border, as if communicated from the aorta pulsating above." No expansile movement, thrill, or bruit can be made out. All numbness is gone from the legs, and the patient declares he is quite well. 25th: Still improving; is moving about freely. No pain since the treatment. The tumor is now much diminished in size, and no pulsation can be distinguished in it. The patient has been out this morning, and walked about a quarter of a mile. His legs failed him once or twice during his walk, owing, he says, to a sensation of numbness in them. When his exercise terminated, he felt a numbness from the umbillcus downwards for several minutes. Several medical gentlemen examined him at this period, and their unanimous conclusion was that all pulsation had ceased in the aorta and the large arteries below the tumor. Amongst these were Dr. Gibb, Messrs. Fips and Armstrong, Mr. Rayne, &c.

May 1st: The patient still improving, and walking in the open air daily. No pain or pulsation. 5th: The man is still improving. He has been out for three hours, and walked a considerable distance without other discomfort than slight weakness and numbness in the legs. The most careful examination, in the presence of several medical gentlemen, fails to detect any movement in the tumor, which is now hard and further diminished in size. 9th: Everything in a most satisfactory state.

*Remarks.*—We may note, in the first place, that here we have a complete triumph for the advocates of compression in the treatment of aneurism, for a hitherto fatal disease has yielded to treatment lasting but for a few hours, and requiring the use of a very simple expedient; secondly, here is proof that the aorta can be blocked without violent symptoms or great inconvenience ensuing; and, lastly, it adds another instance of the value of chloroform, without which the tremendous pressure here used could never have been borne, even though it were to save the patient's life.

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## ANEURISM OF THE SCIATIC ARTERY: INJECTION WITH PERCHLORIDE OF IRON.

On March 18th, Mr. Nélaton treated, by means of injection of perchloride of iron, an aneurism of the terminal part of the sciatic artery,

which was of the size of a thumb and projected in the natis. The case was an interesting one, inasmuch as the patient had already had sciatic aneurism in the same region, for which M. Sappey had in 1850 tied the sciatic artery above the tumor—the operation being for a time successful. This is said to be the first case in which the operation was performed. After one injection of the perchloride of iron, the pulsation completely ceased; the tumor subsequently gradually diminished; there was no inflammation; and, at the end of a month, the patient was making favorable progress towards recovery.—*Gaz. des Hôpitaux*, 19 Mars and 16 Avril, 1864.

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## LIGATURE OF THE COMMON CAROTID.

Prof. C. A. Pope, of St. Louis, records the following interesting case of this:—

The late General Bayard, who was killed at the battle of Fredericksburg, received an arrow-shot wound in the left upper jaw, on the 11th July, 1860, whilst a lieutenant in New Mexico, in a skirmish with the Indians. The iron point, spear shaped, and two and a half inches long, with a small neck for the attachment of the wooden shaft, was driven with force, entering a little below the middle of the orbit, and with a slight obliquity backward. The Surgeon of the post immediately endeavored to extract the foreign body. At first it was hoped that this might be accomplished by traction upon the arrow itself, but this was thereby only separated from the iron point, which remained firmly impacted in the bone. Different forceps were resorted to, and after a short trial the effort was abandoned.

The absence of suitable instruments, the slight hold which could be obtained on the offending body, as the small neck was all that could be seized, and above all the firm impaction, sufficiently account for the failure of extraction. Slight hemorrhages from the corresponding nostrils followed within the subsequent four weeks, and on arriving at St. Joseph, a more serious one occurred.

The patient reached St. Louis, five weeks after the reception of his wound. There was some tumefaction of the left side of his face. The wound at the time had skinned over, so that no foreign substance could be seen, but on gentle pressure with the finger a hard point was perceptible beneath the integument. There was a muco-purulent discharge still issuing from the nostril, proceeding doubtless from the antrum. On incising the imperfect cicatrix, I felt the projecting neck, and supposing that the arrow point, after so long a time, might be somewhat loosened

by the efforts of the organism, I attempted its extraction with the dressing forceps of the pocket case, but found them wholly inadequate. I at once supplied myself with instruments of various kinds, and with a powerful forceps succeeded in one or two efforts in extracting the offending body. This was followed by a troublesome bleeding, both from the nostril and the external wound. By rest, opium, cold plugging and pressure, this was duly arrested, Several slighter hemorrhages subsequently occurred, but they gave rise to no uneasiness.

The case now progressed favorably, and the patient was able to get about the streets. He walked to my office and complained of some inability to separate the jaws, a difficulty, by the way, which had existed all along; I directed him to use gentle and gradual efforts at opening the mouth. In less than an hour his troubles recommenced. The whole cheek and jaw became hot, swollen, and painful. Fever, with renewed hemorrhage, set in, and caused me much anxiety. The same means of arrest first tried did not avail. Extensive extravasation of blood took place; and in order to relieve the pain, tension, and possible sloughing, I deemed it proper to make free counter openings, both in the mouth and on the cheek and neck. From these, large grumous clots were turned out, and through the inner opening the finger's point could be carried round the almost denuded bone, and lodged high up in the pterygoid fossa. The hemorrhage continuing with various and delusive intermissions, the case became critical. Finally for three successive nights, these came on regularly at midnight and were copious and exhaustive. From such repeated losses of blood, the patient had now become reduced to the lowest degree, when the further issue of a few ounces more might have turned the scale against him. I then determined to tie the carotid. This was done on the night of the 16th of September, more than two months after the reception of the wound. Such was the extreme condition of the patient that he fainted during the operation, although in a recumbent position. The operation was a delicate and difficult one, as the parts were very much swollen and altered by sanguineous extravasation and inflammatory effusion, and the incision being correspondingly deep, the effect of artificial light in such cases, at all times bad, was only the worse—for whilst the surface of the wound was well lighted, the sharp, deep shadow rendered its depth almost invisible. The touch, therefore, superseded sight. There was no more hemorrhage. Opium and nutritious ingesta were freely given, and the patient continued to do well. From the thoroughly anæmic state, and the effects of interruption of the cerebral circulation, caused by the ligature, the patient's mind was somewhat impaired, and I feared some altered nutrition or softening of the

brain. These symptoms, however, gradually yielded, and after several weeks he was again up and about. Being rather impatient and self-willed, he went out before I deemed it prudent for him to do so. The ligature was slow in coming away, and for some weeks after its fall, a small fistulous opening remained. The lieutenant now left St. Louis for West Point, to which place he was assigned for duty. When on a visit to his family in New Jersey, and travelling by railroad at night between New York and Philadelphia, after much bodily fatigue, a further hemorrhage occurred from the still unclosed fistula of the cervical wound. By rest and moderate pressure this was relieved. This bleeding was the last—the wound healed and the patient recovered his usual health. There always remained, however, an unpleasant fulness of the affected cheek and masseteric portion of the face.—*St. Louis Medical and Surgical Journal.*

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## A NEW MODE OF TREATING CASES OF VESICO-VAGINAL FISTULA.

By Alfred Meadows, M.D.

A paper on this subject was read before the the Obstetrical Society of London, on the 4th of May. It was contended in this paper, that the usual practice of keeping the patient in bed for two or three weeks after operation for the cure of vesico-vaginal fistula is unnecessary, and that, on the contrary, she may be allowed with perfect safety to go about as usual immediately after the operation. The author showed that the reason given for the former practice—viz., that the parts should be kept quiet, as is fully attended to in the plan suggested as in that usually followed, because the movements of the body do not interfere with the quietude of that particular portion of the floor of the bladder where the fistula existed, there being no muscles in this region which can by their attachments prejudicially affect the part in question. With regard to the second consideration,—that the urine should be kept from the surface of the fistula, either by the constant employment of the catheter or by its frequent use,—the author exposed the fallacy of this argument by briefly reviewing the circumstances which exist after every operation of this kind. At first the bladder is quite empty, but, as urine gradually flows into it, the organ becomes slowly distended; and the very fact of this distension taking place by the uniform pressure of the urine, proves that contact of that fluid with every part of the bladder-wall cannot be avoided: no position of the patient can prevent it, and consequently the recumbent posture is not needed on this account, nor is the use of the catheter of any service. Two cases were detailed in which the plan here

suggested by the author had been carried out with perfect success. In one, where chloroform was not administered, the patient went about immediately after the operation, and followed her usual avocations. In the other case, the patient had chloroform, and on this account chiefly, she kept in bed that day; but the next day she was allowed to go out, and her cure was equally complete. In both cases the opening was large enough to admit the finger easily; and in one of them it was situate far in the vagina. The author recommended the use of many sutures, merely twisting them, and without either clamp or shot; he also advised that they should be allowed to remain some time to secure firm union, their presence occasioning no inconvenience. One of the cases cited was further remarkable, inasmuch as by the process of sloughing which had previously taken place, no trace of the uterus could anywhere be discovered, and the patient has continued for some time past to menstruate through the bladder.

Dr. Oldham thought it a great point to save patients from the irksomeness of wearing apparatus; and by showing that the confinement hitherto considered necessary was not required, Dr. Meadows had done good service.

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## TARTARISED ANTIMONY AS A REMEDY IN STRUMOUS OPHTHALMIA.

By Edwin Chesshire, F.R.C.S., Senior Surgeon to the Birmingham and Midland Eye Hospital.

I have so frequently prescribed tartar emetic, generally in combination with opium (but often alone,) in strumous ophthalmia, as well as in acute corneal and conjunctival inflammations, and with such marked success, that I have no hesitation in suggesting to my professional brethren a more extensive use of the remedy in the treatment of those obstinate, and frequently protracted, affections of the eye.

In cases of strumous ophthalmia, where there was excessive photophobia, I have found the internal administration of tartarised antimony, in doses varying from one-twentieth to one-twelfth of a grain, according to the age of the patient, to be attended with the most decided benefit; and its efficacy has been singularly marked, where quinine, steel, arsenic, and cod-liver oil, had each, in its turn, been tried and failed. No remedy that I know of so completely or so permanently removes the photophobia, which is such a distressing symptom in strumous affections of the eye.

In phlyctenular ophthalmia, and in vascular cornea or pannus, uncomplicated with a granular condition of the palpebral conjunctiva, or with inversion of the cilia (trichiasis), a continued course of tartar emetic, in

small doses, arrests the progress of the affection most effectually, and with it may be combined the early use of local stimulants, a combination which may be continued, if necessary, for a lengthened period without injury to the general health; in fact, the patients who have taken tartarised antimony under my care, both at the Eye Hospital and in private practice (and I have prescribed it very extensively), have almost invariably told me how much stronger and more energetic they felt during the time they were taking the remedy. I am aware it has long been the practice of ophthalmologists to administer a single emetic dose of tartarised antimony, as a beginning to the treatment of strumous ophthalmia; and that it has occasionally been given in combination with bark and quinine; but it does not appear to have been resorted to as a remedy, *per se*, for the cure of strumous affections of the eye. It is quite true, in the case of the little strumous patients, while under treatment, that they were usually placed on milk diet; and when the photophobia was severe, attention was paid to the exclusion of light, which would probably assist in promoting a favorable result; but the same diet was generally resorted to, and the same care to exclude light was taken, when the treatment had consisted of cod-liver oil, quinine, etc., and yet often with an unsatisfactory result.—*British Medical Journal.*

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## CAUTERISATION OF MALIGNANT PUSTULE.

The Drs. Maurezin have published in the *Archives de Médecine* for March, 1864, a memoir on the treatment of malignant pustule, in which they relate fourteen cases shewing the efficiency of the actual cautery. The success of this application was complete, even in one case where the disease was of six days' duration. In a case of pustule seated in the fold of the elbow, in front of the tracheal artery, the application of the cautery was unattended by any dangerous result, and was followed by success. This mode of treatment is suitable in the first and second stages of the disease, while only an inflamed areola and vesicles are present. The whole disease may be removed without leaving a large wound; but a cicatrix is left, which on the face is more or less unsightly. This treatment is not new. Malignant pustule, when it was seen by Duhamel in 1737 and described by Morand in 1766, was treated in the provinces by extirpation, Maret of Dijon and Fournier extirpated malignant pustule and applied red-hot iron. There is reason to believe that this practice, which Thomassin opposed, had then become common; since Enaux and Chaussier have described in several pages the inconveniences of the proceeding, preferring to it a combination of scarification

with cauterisation. The treatment of malignant pustule affords an instance of the danger of laying down therapeutic formulæ as absolute. Maret succeeded in some cases in curing the disease by extirpation; but he failed in others—and the operation was condemned. In some of his unsuccessful cases, cited by Thomassin, however, the disease had arrived at the gangrenous stage and was very extensive; and in this instance the want of success is no argument against the operation, which failed because it was performed too late. At the present day, it seems that, at the commencement of the disease, extirpation or the actual cautery are the most powerful agents; and if the cicatrix left after simple extirpation be equally healthy with that left after cauterisation, the former operation is to be preferred. When the disease has extended, scarification, and the application of caustic solutions, such as butter of antimony and corrosive sublimate, or with caustic potass, are the best means of treatment.—*Gaz. des Hôpitaux.*

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## INGUINAL ANEURISM TREATED BY COMPRESSION.

An officer came under the care of M. Rizzoli, with an aneurism of the left groin, the result of a fall. As the tumor reached into the pelvis, compression could only be applied below it. At the end of three days, in spite of interruptions of the treatment, fibrine had been deposited, and the aneurism so far hardened and reduced in size that it became possible to apply pressure above it. This was at first done by means of the finger; but, although Valsalva's method of treatment was also followed, only an imperfect effect was produced. Electro-puncture also produced merely an incomplete and temporary result. As the aneurism, although diminished in size, continued to pulsate at the end of forty days, M. Rizzoli had an instrument used, by which pressure could be more easily and exactly applied to the artery where it passed over the bone. At the end of two days, this pressure, which had been maintained sometimes by the patient himself, sometimes by an assistant, had caused pulsation to cease, not only in the aneurism, but in all the arteries of the limb; the temperature of which, however, remained normal. The pulsation gradually returned in the arteries of the foot and leg. The aneurism remained hard and free from pulsation; and at the end of thirty-five days the patient left the hospital cured.—*Acad. delle Scienze dell' Institut. di Bologna*, and *Bull. Génér. de Ther.*, 30 Avril, 1864.

# Medicine.

## DISEASE OF THE SUPRA-RENAL CAPSULES—DISCOLORATION OF THE SKIN—PELVIC ABSCESS.

(Under the care of Dr. Greenhow.)

W. B., aged 24, married, engineer's laborer, admitted April 12th, 1864. A slight man, under middle height, naturally of rather dark complexion, and with black hair. Stated that, with the exception of an attack of fever eight years ago, he had enjoyed good health until between eight and nine months previous to his admission, when an abscess formed in the left hypochondriac region. The abscess did not prevent his following his usual employment. In October last, a month or six weeks after the healing of the abscess, he had been seized with severe pain in the left hip, shooting downwards in the course of the sciatic nerve towards the knee. This pain had never since left him, though it had varied in intensity from time to time. Had been gradually getting weaker during these months, and had very rapidly declined in strength during the last ten days. Had had for some weeks nausea and occasional retching, with, for the last few days, vomiting of food. Appetite much impaired during the last fortnight. Bowels habitually costive, had become more so during his illness. Had suffered much from flatulence and gastralgia. Had lately suffered from attacks of breathlessness and faintness on exertion, and actually fainted while under examination in the waiting room. These symptoms led Dr. Greenhow to suspect the case to be one of Addison's disease before he had observed any discoloration of skin; and the patient's wife and mother, on being questioned, said that they had observed his complexion becoming darker about three months ago. Capt. hst. potass. citrat. effervesc.; am. cu. ferri, gr. v. ter die; port wine, 6 oz.

April 13.—Skin cool; tongue flabby, moist, coated on dorsum with a yellow fur; urine somewhat dark colored, highly acid, copious, free from albumen, sp. gr. 1022; pulse from 94 to 100, variable, extremely feeble, small and compressible; heart's impulse feeble, and sounds exceedingly faint; resonance normal on percussion over both sides of chest; breathing sonorous, with very slight rhonchus; slight cough with scanty, tenacious, nearly transparent expectoration. Patient could scarcely be raised up in bed on account of tendency to faintness. General hue of skin a dusky brown, face somewhat darker, closely resembling that of a person of color. Sides and back of neck, from hair downwards to shoulders, darker than face. Hands much darker than arms, and all the knuckles sensibly darker than surrounding surface, as were likewise several spots where the skin had form-

erly been abraded. Here and there, on the neck, were one or two well defined darker specks resembling moles. The skin over the spine, for about nine inches downwards from the eighth dorsal vertebra, was much darker than the rest of the back. Over the left hip, where a blister had been applied four months before, was an oblong surface, nearly four inches by five, much darker than any other part of the body, and on it were several spots, where apparently there had been superficial ulceration, which were almost as black as the skin of a negro. Nipples and areola very dark, almost black. Axillæ scarcely appreciably darker than the rest of surface, but groins sensibly so. Penis extremely dark. Thighs and legs less dark than body. The lips had a dark, almost black, stripe of varying breadth extending along their whole length. The buccal mucous membrane, with the exception of a few intervening paler spots, was also of a dark, almost black color; and there were several well-defined dark patches on the gums of the lower jaw. The conjunctivæ were clear and perfectly white. The skin was everywhere soft and free from eruption. Body somewhat wasted, but not emaciated. Pergat. Pil. coloc. c. hyosc., gr. x., horâ somni.

14th.—Has had much sickness during the night, vomiting almost everything he has taken. Bowels have acted once loosely. Pulse 108, exceedingly small and feeble. Is very languid, and feels more faint to-day than he has hitherto done. Complains much of pain in the chest, which is worse after food and before sickness. Urine copious, high colored, sp. gr. 1019, no albumen. Hst. acid nit. mur., ℥j. ter die; port wine ℥viii.; brandy, ℥j.

15th.—Much the same as yesterday with regard to pain in chest and vomiting of food, but is evidently weaker. Pain in hip persistent. Pt.

16th—Has slept fairly. No pain in chest at present, but constant vomiting after taking food. Pulse 120, very small and feeble. Constant feeling of faintness. Surface cold and pale. Speaks slowly, as if unwilling to be disturbed. 8 p.m.—Looks anxious and exhausted. Pulse 144, almost imperceptible. Intellect unimpaired. Enemac. suc. bov., ℥iij.; spt. vn. gal., ℥ij., statim et 4tis horis.

17th.—Vomiting still continues, faintness most intense, pulse scarcely perceptible, and heart sounds only audible on very close examination. Extremities cold and sight dim. He sank and died about 1 p.m., his intellect remaining unimpaired to the last.

*Post mortem examination twenty-six hours after death.*—Rigor mortis well pronounced. Body spare, but not emaciated. General hue of skin dusky, but so much paler than it had been during life that if then seen for the first time, it might have been regarded as the natural color

of a rather dark person. Face and neck were somewhat darker than the greater part of the rest of the body. Thighs and legs apparently of normal color. Skin of axillæ and of hip, where the blister had been applied, decidedly darker than the surrounding surface. Penis and scrotum much darker than any other part of the body. Dark stains on lips and on buccal mucous membrane remained almost as during life. Muscles of normal red color. Heart had much fat on its outer surface; muscular tissue somewhat pale; valves normal. Right auricle and ventricle were nearly filled with a large firm, yellow clot, entangled in the cords of the tricuspid valve, and sending a process into the appendix auriculæ. Both lungs firmly adherent to ribs; lung tissue here and there slightly congested, but free from all traces of tubercle. Many of the mesenteric glands were enlarged, some being of the size of beans. Their surfaces were pale and yellow, and on section they appeared of a yellow color, and had a dry, somewhat cheesy texture. Microscopical examination showed these glands to be infiltrated with a finely granular substance, in which were numerous granular cells and nuclei, and many cells containing oil-globules. Vessels of small intestine much congested; Peyer's patches enlarged, prominent, of yellowish white color, and remarkably opaque; the solitary glands scattered throughout the ileum also enlarged; no appearance of ulceration. Supra-renal capsules were both closely invested with very dense connective tissue, containing a good deal of fat. The left capsule was one-third larger than the right, its weight was six drachms, and it measured longitudinally two inches and three-quarters, and transversely one inch and a quarter; it was of very firm consistence, and on section no distinction was visible between cortex and medulla, the whole organ being converted into a mass of firm, yellowish-white tissue, in parts semi-transparent. Scattered through this mass were numerous opaque yellow deposits, varying in size from a hemp-seed to a pea, of cheesy consistence, mixed with gritty matter. On microscopical examination these cheesy deposits were found to consist of opaque, amorphous granular material, mixed with granular shrunken cells and nuclei, and some oily matter. The intervening portions, in addition to similar granulous material, consisted of fibrous tissue. The right capsule weighed four drachms, and measured longitudinally rather less than two inches, and vertically one and a half inches. In structure, it closely resembled the left capsule; but one of the cheesy masses was of the size of a small bean. On laying open the pelvic fascia at upper edge of true pelvis on left side, about half an ounce of thick creamy-looking pus escaped; the abscess communicated with carious bone at the left sacro-iliac synchondrosis. Blood much thicker and darker than usual, presenting under the microscope a great excess of red corpuscles.

*The British and Foreign Medico-Chirurgical Review* for the quarter ending July 1st, in its half yearly report on "Materia Medica and Therapeutics," mentions Prof. Courty's (of Montpellier) treatment of facial paralysis by injections of a few drops of a solution of strychnia along the course of the facial nerve, between its exit by the stylo-mastoid foramen and its passage to the neck of the condyle of the lower jaw.

The injection was repeated every two or three days; and three injections at the least, and six at the most, sufficed to remove entirely, in the space of from ten to fifteen days, every trace of paralysis in all the muscles of the face. The patients were, a man of fifty-six years, a lady of twenty-five, and a young woman of twenty-two. In all cases the cure was complete.

The same author also gives a case of paralysis of a year's duration, which after the failure of various other lines of treatment, was cured by a few injections of strychnia performed over the inferior extremity of the spinal cord.

M. Luton (of Rheims) also has successfully practised local injection of various remedies, having cured twelve cases of sciatic neuralgia, two of intercostal neuralgia, three of coxal neuralgia, &c., by the use in the same manner of a more or less concentrated solution of nitrate of silver. He found three injections of salt water remove sub-orbital neuralgia in one case.

One case of parenchymatous goitre he cured by injection of tincture of iodine. Two similar cases were still under treatment at date of the report. The applications of which this new plan are susceptible, it is observed, are very numerous, and may include the use of bichloride of mercury, arsenious acid, sulphate of copper, sulphate of zinc, and any other irritating substance which acts in the interior of the tissues in the same manner as one which is applied on their surface.

It is only right to observe that the treatment of sciatica, &c., by local injections, is not at all new, as we have seen a solution of morphia used in this way in sciatica many years ago in Dublin.

The dried stem of the Laminaria Digitala, or Sea tangle, is much recommended by Dr. Sloan of Ayr, as a substitute for ordinary tents in surgical practice, from its property of expansion on absorbing moisture after having been introduced in the dried state.

Dr. Wilson, Lecturer on Midwifery, Glasgow, advises the use of this substance for dilating the os and cervix uteri, the mucous discharges being sufficient moisture to cause the expansion of the tent. We have heard of the use of the same substance in the form of bougies in stricture of the male urethra in one of our Dublin hospitals. It is capable of being applied in a variety of ways. Dr. Wilson has found the young

tangle expands more readily and more largely in proportion to its size; however, the older tangle exerts a more powerful dilating effect. They possess many advantages over sponge tents.

Sarracenia purpurea, which our readers will remember was so much lauded for the cure of small-pox, has proved useless in Mr. Marson's hands, (see *Lancet*, 1863, vol. ii., p. 6), every case, fifteen in number, having proved fatal.

The value of the Calabar bean is now established. Mr. Thomas Nunneley in England, and other observers, have recorded their experience of its value in preternatural dilatation of the pupil in prolapsed iris from wounds, operations, &c., as well as in cases of prolapse from sloughed cornea. It has been applied in the form of solution saturating* paper, which was placed between the lids; but a less objectionable form seems to be a tincture prepared now by Mr. Squire, and diluted in the proportion of one drop of the tincture to ten of water, which will prove sufficiently strong for many cases.

Mr. Nunneley relates the case of an infant, three weeks old, with much of both corneæ in a state of slough, the result of acute purulent ophthalmia, in which he found a solution of the spirit extract of the Calabar bean placed in the eyes night and morning had caused much the largely protruded irides to recede; the case was still in progress at the date of Mr. Nunneley's last paper.—*Dublin Evening Press.*

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## REPORT OF THE COMMITTEE ON CHLOROFORM.

The report of the Committee of the Medico-Chirurgical Society on Chloroform has been produced this week, and an abstract of it was read at a special meeting of the Society held on Tuesday last. The labors of the Committee have been very protracted; upwards of seventy meetings having been held, and a very large number of experiments performed. The report is of so great length that we shall find it difficult even to present it in abstract. We may however mention some of the leading facts.

The Committee have especially investigated the important question of the influence of chloroform on the heart and on the respiration. Here are their most important conclusions on this point. They say that "the first effect of the chloroform vapor is to increase the force of the heart's action, but this effect is slight and transient, for when complete anæsthesia is produced the heart in all cases acts with less than its natural

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* Gelatine paper saturated with the solution has been used with advantage since Mr. Nunneley wrote.—*Brit. and For. Med. Chir. Review.*

force. The strongest doses of chloroform vapor, when admitted freely into the lungs, destroy animal life by arresting the action of the heart; whilst by moderate doses the heart's action is much weakened for some time before death ensues; respiration generally, but not invariably, ceasing before the action of the heart, death being due both to the failure of the heart's action and to that of the respiratory function. The danger attending the use of chloroform increases with the degree of stupor it induces; the apparent irregularities in the action of the anæsthetic mainly depending on the varying strength of the vapor employed, or the quality of the chloroform, and on the constitution of the patient. In order that it may be administered with comparative safety, it is necessary that the percentage of vapor should not exceed three and a half per cent, that its effects should be carefully watched, and the inhalation suspended when the required anæsthesia is induced. In many respects the action of ether is similar to that of dilute chloroform. At first its vapor increases the force of the heart's action, an effect which is both greater and of longer duration than that observed with chloroform. The stimulation is followed by a depression of the force of the heart's action, but, at the same degree of insensibility, ether does not depress the action of the heart to the same extent as chloroform; eventually, ether kills partly by enfeebling the action of the heart, but chiefly by arresting the movements of respiration. Thus the energy with which chloroform acts, and the extent to which it depresses the force of the heart's action, render it necessary to exercise great caution in its administration and suggest the expediency of searching for other less objectionable anæsthetics. Ether is slow and uncertain in its action, though it is capable of producing the requisite insensibility, and is less dangerous in its operation than chloroform. On the whole however, the Committee concur in the general opinion which in this country has led to the disuse of ether as an inconvenient anæsthetic. A mixture of ether and chloroform is as effective as pure chloroform, and a safer agent when deep and prolonged anæsthesia is to be induced; though slow in its action, it is sufficiently rapid in its operation to be convenient for general use. A mixture composed of ether three parts, chloroform two parts, alcohol one part (by measure), is to be preferred on account of the uniform blending of the ether and chloroform when combined with alcohol, and the equable escape of the constituents in vapor, and the Committee suggest that it should be more extensively tried than it has hitherto been in this country." As to resuscitation, they find that "the most certain means of restoring life after poisoning with anæsthetics is by artificial respiration." By this means resuscitation may generally be accomplished after natural respiration has ceased, provided the heart con-

tinue to act; and it may sometimes be effected even after the cessation of the heart's action, but this result is exceptional. Galvanism resuscitates within the same limits as artifical respiration; it is, however, far less to be relied on than artifical respiration in equal cases. With either remedy it is found that animals quickly rendered insensible by a strong dose are more easily recovered than those which have been gradually narcotized even by a small percentage of the anæsthetic.

In their rules for the administration of chloroform, they state that an apparatus is not essential to safety if due care be taken in giving the chloroform. Free admission of air with the anæsthetic is the one thing necessary, and guaranteeing this, any apparatus may be used. Three and a half per cent. is the average amount, and four and a half the maximum proportion of chloroform to atmospheric air which is either needful or safe. In case of accident in the more threatening conditions, artificial respiration is advised to be commenced instantly, and this equally in all cases, whether the respiration has failed alone, or the pulse and respiration together. Galvanism may be used concurrently; but artifical respiration is on no account to be delayed or suspended in order that galvanism may be applied. The uses of chloroform in natural and abnormal labor are very carefully discussed. There are considerable appendices, giving lists of selected experiments, an analysis of accidents with chloroform, statistics of surgical operations, selected experiments on resuscitation, and an obstetrical report. The whole document is one which will be read with great interest, and gives evidence of industry and ability such as committees rarely lavish on their joint-stock productions.—*Lancet.*

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## EVIDENCE AGAINST THE INTERNAL USE OF MERCURY IN SYPHILIS AND OTHER DISEASES.

In a paper read at the Harveian Society of London, Dr. Drysdale has collected a great mass of evidence against the internal administration of mercury, and his statistics and conclusions are brought forward to support the assertion that this metal does more harm than good to the patients for whom it is prescribed. By quotations from Skey, Desruelles, Copeland, and others, he shows that mercury possesses the physiological property, when given to dogs, of producing caries of bones and complete degradation of the animal frame. Dr. Drysdale contends that the only property which mercury is proved to possess is its power as a purge, but that it is a bad purge; and although it is called a cholagogue, recent experiments have shown that it actually diminishes the secretion of bile. In iritis, mercury has been shown to be useless and probably injurious

by Carmichael, Dr. Hughes Bennett, and others. Dr. H. Bennett also condemns the use of mercury in inflammatory diseases of the lungs, and Dr. Walshe entertains the same views. With regard to syphilis, in which mercury has long been considered a specific, Dr. Drysdale quotes Dr. Wm. Fergusson, who showed, in his experience from 1812 to 1846, how many thousands of the British army had recovered from primary and secondary syphilis without a particle of mercury; and on the other hand, how the British army suffered in the Peninsula from the mercurial treatment. Mr. Guthrie had declared that all sores on the penis, whether indurated or not, will recover perfectly under rest, diet, and cleanliness, without mercury. Out of 407 cases treated by Hennen, iritis occurred only in one; in 1818, Dr. John Thomson had treated a large number of troops in Edinburgh for venereal disease without mercury, and they all recovered; Dr. Desruelles mentions that in 1841 300,000 cases of venereal disease, treated without mercury, had been recorded. Dr. Fricke had treated in the Hamburgh Hospital, from 1824 to 1844, 15,000 cases of venereal disease, and his experience is strongly against the use of mercury. The experience of the Swedish government from 1822 to 1836, during which time 46,687 cases were treated, has shown that the non-mercurial treatment is infinitely the more successful. The French Council of Health have shown that of 5271 cases treated without mercury, no case of caries occurred, and only two of exostosis. Mr. Syme considers that syphilis consists of the primary ulcer, sometimes followed by sore-throat and slight, though sometimes tedious eruptions, but never by bone disease or any very bad symptoms when mercury is not used. Dr. Hughes Bennett says that the idea of mercury being an antidote for the syphilitic poison, and the incalculable mischief it has caused, will constitute a curious episode in the history of medicine at some future day. With regard to infantile syphilis, Dr. Drysdale observes —1. That he believes this condition in infants is frequently caused by the poisoning of the parents by mercurio-syphilitic disease; and 2. That infantile syphilis is far more successfully treated without mercury than with it.

It must be observed that in the discussion which followed the reading of Dr. Drysdale's paper, several speakers supported the sentiments he had expressed, but others agreed with him only to a limited extent. More recently, many distinguished physicians and surgeons have combated Dr. Drysdale's views.—*Med. Circular.*

# Canada Medical Journal.

MONTREAL, SEPTEMBER, 1864.


## REPORT OF INSPECTORS OF ASYLUMS AND PRISONS, 1863.

The Report of the board of Inspectors of Asylums, Prisons, &c., for the year 1863, has been furnished us through the courtesy of the Editor of the Montreal Transcript. So far as we are concerned as members of an important body of the community, we must reiterate the opinion passed by the board, of the great need there exists for the establishment in the vicinity of our city of a lunatic asylum of sufficient size to fulfil the requirements for the whole district. That people mentally deranged should be a charge on the public, except in very rare instances, need not be the case; but that the government should either provide a public building specially designed for the accommodation of those thus afflicted, or permit it to be done by private enterprise, seems to us a positive duty.

We do not wish to go upon the principle that because Upper Canada, or rather, in parliamentary terms, that part of the province of Canada, heretofore called Upper Canada, possesses five lunatic asylums. The lower province, or that section known as Lower Canada, should possess five also. We are perfectly willing to see a hundred such institutions in the West if they are necessary, and but one amongst us, if sufficient for all our wants; but when on all sides is acknowledged the great need of an institution with the above objects, why delay? Such an asylum, even though it were a private institution, could be made to pay expenses. How is it at Beauport,—a private enterprise by a few stock holders, originally we believe, confined to three, and which has been a mine of wealth to those gentlemen?

Will the government entertain the idea here in Montreal? If so, we will guarantee to have an establishment sufficiently large to accommodate all the lunatics in the district of Montreal—(this, by the way, is offering a great deal)—within twelve months from date, provided the government give us the like terms as those passed between the Government of the day and Drs. Morin, Douglas, and Fremont in 1844. We have heard that it is in contemplation to enlarge the Beauport Asylum, to double its

present capacity, and that the Government are in treaty with the proprietors of that institution with the above object. There are many objections to be offered to this suggestion. In the district of Montreal there is no asylum, if we except that at St. Johns, which is a disgrace as a Government enterprise; the building is in every way unfit, and there is wretched accommodation for about fifty-seven patients. In thewords of the Inspectors: "The building is entirely unfit for the purpose to which it is at present applied. The lunatics are piled one upon another, and the several classes are separated from each other nearly everywhere by wooden partitions only." Such is the so-called asylum at St. Johns, for all practical use a dead letter. The Medical Superintendent, "Dr. Howard, is deserving of all praise (to continue the words of the report) for having done so much with the wretched means placed at his disposal." Surely the occurrences of the past few weeks should strike terror into all thinking minds. We have had two catastrophes! with loss of life in the destruction by fire of two of our public buildings. Were a third to occur at the St. Johns Asylum, the probability is we would have to chronicle a much larger loss of life, where sixty insane persons are huddled together in a wretched building constructed principally of wood. In this section of the Province a large number of insane persons are annually presented for care and treatment. Many of these, for the want of a proper institution, are constantly being sent to private asylums in the neighboring republic; the balance are temporarily placed in the district jail where they remain until a sufficient number are gathered for disposal by two medical men, and two judges of the Queen's Bench. We have known cases of acute mania which were amenable to treatment, and who, had they been promptly attended to, would have unquestionably recovered, allowed to remain in the cells of our common jail for months, thus doing them a positive injustice, depriving them of all chance of recovery. Again, if the idea of enlarging the Beauport Asylum is entertained and carried into effect, giving Montreal the go by, many insane persons would have to remain either under the care of their friends or in the jail accommodation during the inclement season of winter, or run the serious risk of removal, in some instances over 200 miles, which would hazard their lives, and lessen their chance of ultimate recovery. On this point we may beg to refer to the report of Dr. Howard, who mentions two cases, one, that of an old woman, who was sent to the Asylum from the Quebec jail, and who died a few minutes after her admission. Surely she was not in a dying state when sent from Quebec, as this would suggest the idea of most ruthless barbarity on the part of the jail authorities of Quebec; but the fatigue of the journey contributed to the fatal result. In every way, therefore, laying aside all

question of monopoly, we deem it exceedingly inexpedient the establishment of one large asylum for the entire Lower Section of Canada.

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## THE LUNGS OF CITIES.

The pride of London is its noble parks and equally magnificent squares. To the weary and toil-worn artizan living in the back lanes and overcrowded tenements of that wonderful city, no words can picture the pleasure and the benefit which they afford him during his leisure hours. Pure air is a blessing, which none can so fully appreciate as those who have but little of it; and it is as essential that every city should have its squares and parks for breathing places, as that attention should be paid to drainage and other sanitary conditions. Amply as the metropolis of our empire is supplied with these necessary adjuncts to health, its rapidly increasing population is now demanding more. The registrar-general of Great Britain in commenting upon the result of the census of 1861, says: "When a family increases in its narrow lodging, in circumstances of dirt and squalor, that increase, which should be its blessing, becomes its bane. And in a city or state the growth of its population is not a strength to be trusted, but a weakness to be feared, if improvement in its physical and moral condition is not commensurate with the growing urgency of its wants." The *Lancet* tells us that London is the least unhealthy of the great European cities, but for all that it is not by any means healthy, and that one third of the lives within its bounds are annually wasted, owing to the overcrowding of its population. This massing of the population is a frightful source from which disease emanates, and a still more frightful source of its propagation. To counterbalance this growing evil, well-ventilated dwellings for the poor, and more open squares are being loudly demanded. Our own city has seen its weekly bills of mortality rise to a very high rate within the past years. An epidemic of small-pox and of scarlatina has helped to swell the list; and if we seek for the cause we find that overcrowding of our population is at the foundation of it. No one but he whom duty calls into those portions of our city occupied by the laboring classes, can form any idea of the mass of human beings that are to be found huddled together in places where but little of heaven's light is to be seen and where none of God's pure air is breathed. We point with pride to the rapid growth of our city, but that growth is bringing upon us many of its terrible consequences: while palatial mansions surround us on many sides, we look in vain for a better class of houses for our working population; thousands of them still live—still eat and sleep in an atmosphere, filled not only with the carbonic acid exhaled by expira-

tion, but with innumerable other impurities engendered by a defective drainage; and as our growth goes on, this massing of the poor is becoming greater. This is an evil which exists in every large city; it is perhaps almost vain to look for a remedy; but while we cannot remove it, there is much we can do to alleviate it. In a word, supply breathing places for our population; give our city—lungs. Unfortunately for us, our ancestors seem to have had but a faint idea of Montreal becoming the great city it is even now. Our streets—many of the old ones, are very narrow, and are costing us no small amount to widen them, and until lately we were entirely destitute of public squares; but within a few years, thanks to the energy of our city council, our city has been redeemed from this slur, and we now have several handsome squares, and others are rapidly increasing in beauty, but their limited capacity render them unfit for any large number to take advantage of them. It is therefore with no little pleasure we note the action of our council with reference to the matter of a public park. It is a most important one in a sanitary point of view; and to the gentlemen who are actively working in this matter we most heartily say, "God speed." A word or two more and we have done. Let no thought of cost deter them from having a large and well planned park; one not only large enough now, but capacious even a hundred years hence. The site of the old race course and mountain, visited some weeks ago, seems a noble one; it would give a splendid pair of lungs to our beautiful city; it would give pure invigorating air to our population, and do not a little to keep down our now apparently increasing mortality. This is no mere local question: our remarks apply to every city in the province; let the council of each see that its population has ample breathing space. Those who have taken the initiative in our own city deserve much credit, and if they carry it faithfully through, we envy the pleasant fame which awaits them in the history of Montreal.

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## YELLOW FEVER.

We have been much pained to learn of the serious outbreak of yellow fever at Bermuda, intelligence of which reached this city about the 14th August. The British troops have suffered severely, and the disease at last accounts was making sad havoc among them. A number of army medical men were at once ordered to proceed to the scene of the epidemic to assist their brethren; and on the 17th the following left our city for Portland, *en route* for Halifax, where they will take steamer for Bermuda:—Dr. Taylor, Surgeon Major, from the Kingston garrison; Drs. Barrow, Surgeon Major; Moffatt, Surgeon; Milroy, Assistant Surgeon,

30th Regiment; Ferguson, Assistant Surgeon, 30th Regiment; Harrison, Assistant Surgeon, R.A., from Montreal; Dr. Clarke, Surgeon, from Quebec; Dr. Mills, Surgeon, from Hamilton; Dr. O'Brien, Assistant Surgeon, Sandwich; Dr. Hinde, Assistant Surgeon, Niagara; Dr. Killery, Assistant Surgeon, St. Johns; and Dr. Meadows, Assistant Surgeon, R.C.R. May God protect them while performing the duties of their noble calling, surrounded as they will be by dangers, more imminent even than those which surround the soldier on the field of battle.

## MEDICAL NEWS.

EDINBURGH.—We gather from our English and Scotch exchanges the following items of medical news from Edinburgh:

The candidates for the chair of Surgery in the University, vacant by the death of Professor Miller, are Mr. Spence, Dr. H. P. Watson (a son-in-law of Prof. Miller), and Mr. Lister (son-in-law of Mr. Syme), Prof. of Surgery in the Glasgow University. The contest promises to be a very warm one.

The July number of the Edinburgh Medical Journal contains a case of successful primary amputation at the hip-joint (the first in Scotland that has been successful), by Mr. Spence. The subject was a young boy twelve years of age, over the upper part of whose thigh, just below the pelvis, the two wheels of a truck passed obliquely. The accident happened at Melrose station, and the boy was conveyed to his home a mile distant, under the direction of a medical man. On examination, a large flesh wound was found at the upper and inner part of the thigh, exposing the muscles, which were much torn and bruised, allowing the finger to pass deeply into the tissues of the limb. The femur, at and below the trochanters, was much shattered. The foot was cold, and pulsation at the popliteal and tibial arteries very weak, but there was but little blood lost. The boy's only chance of life appearing to be in amputation of the hip-joint, Mr. Spence was telegraphed for to Edinburgh, and reached the patient at 9 p.m., and at once coincided with the conclusion as to the course to be pursued. We give the account of the operation in Mr. Spence's own words:

"The room was small, and the only light procurable was from a small lamp on the mantelpiece, and two small candles held by a non-professional assistant; a wax taper I had brought with me was kept in reserve for exigencies. Dr. Smith took charge of compressing the common femoral on the brim of the pelvis, and I instructed one of the patient's

friends how to command the bleeding from the posterior flap, by grasping it with one hand pressing a large sponge upon its surface. Dr. Brown took charge of the movements of the limb, whilst Dr. Clarkson administered the chloroform. When the boy was brought under its influence, I entered my knife between the trochanter major and the anterior superior spine of the ilium, and carrying it obliquely across the thigh, brought the point out a little above the tuberosity of the ischium, cutting a short anterior flap. Dr. Brown then rotated and depressed the limb, with the view of facilitating disarticulation; but owing to the shattered state of the femur, this movement did not produce the desired effect. Fortunately, however, this caused no great delay, for my knife had opened the joint in passing across the limb; and by grasping the upper broken fragment of the bone, so as to project the head, I completed the disarticulation, and cut as large a posterior flap as I could obtain from the uninjured parts. Some vessels on the posterior flap were first secured, and then the great vessels in the anterior flap,—the vein being included in a ligature. I then removed some contused and doubtful-looking portions of muscle. After all bleeding had been arrested, the flaps were brought together with sutures; and considering the nature of the parts from which the flaps were formed, they fitted tolerably well. The stump was then dressed, and the patient placed in bed, hot bottles applied, and some stimulus given, as he was very weak. He lost very little blood during the operation, as I ascertained by carefully collecting the blood from the stone floor, when it was found to amount to less than half a small teacupful; and altogether, with what was in the sponges, to about five ounces at most. After waiting till the little patient had completely rallied from the chloroform, and had got an opiate administered, I left him in the charge of Dr. Smith, who remained with him all night.

*Examination of Limb after Removal*—On examination of the limb after removal, the femur, from the large trochanter downwards for about two inches, was found to be broken into numerous fragments, the ragged edges of which were embedded in the surrounding soft parts. The muscles and other structures were much bruised and torn, but there was no direct injury to the large vessels or nerves."

The night after the operation was passed by the patient in a restless manner, and there was slight delirium. Pulse 134. The treatment was stimulating, consisting of opium, tincture of the muriate of iron, brandy, beef-tea, milk, &c. From this date (Sept. 4) the pulse gradually fell, and the patient improved until the 8th, when it was 90. On the 9th, the stitches were removed, and the pulse was slightly increased,

and the patient had an attack of diarrhœa. The pulse was 120 on the 21st, and the delirium had returned. The same treatment was continued, and on Oct. 4th the pulse was down again to 102. From this time the recovery was tedious, but uninterrupted, the patient's strength increasing, under tonics, wine, &c. The femoral ligature did not come away until the 4th November. By the 1st of January, 1864, the wound had entirely closed, and he was able to move about with the aid of crutches. Mr. Spence makes some most interesting remarks, on the case, but we have only room for the following:

"The age of the patient may seem to explain the favorable result. It has been said that in youg patients, from the greater remedial powers of nature, and the smaller surface caused by the operation in them, the operation is likely to be more successful; but this is very questionable. The remedial powers in young persons are no doubt great, when once a certain point has been passed; but the first effects of shock either from accident or operation, and especially the loss of blood, are not well borne by such patients, and these, together with the irritability of constitution, which is often marked, in a great measure, I think, counterbalance the remedial powers observed in them. Then, as to the less amount of cut surface, though less absolutely, it is quite as great comparatively to the size and vital powers of the patient. The amount of mutilation, the consequent derangement of the circulation, and all the risks depending on these conditions, are at least as great relatively in the boy as in the adult. From what I have observed in the case of primary amputations in young children, the patients sometimes sink rapidly and without any very apparent cause, whilst even the successful cases are often attended at first with as urgent constitutional disturbance as in adults, Indeed, the state of the patient whose case I have recorded, shows how great was the constitutional shock during the first four days, and how slowly full reaction set in. The true causes of success will, I think, be found in the nature of the injury, the small amount of blood lost, and the comparatively little shock he was subjected to after the occurrence of the accident."

Mr. Spence still continues to advise amputation by a long anterior flap. It prevents the possibility of the occurrence of those ulcers which often appear on stumps, owing to long continued pressure on the cicatrix. We have seen Mr. Spence operate in this way, and certainly his stumps are everything that a surgeon could desire.

Dr. Fraser, writing from Dublin, gives us the following items of medical news:

"Surgeon Butcher is, I understand, preparing a new work on surgi-

cal practice, with numerous illustrations, to appear during the next session."

"Dr. Cullen, of the Meath Hospital, is working at an illustrated volume on tumors, particularly those of a cancerous character; a subject to which he has devoted himself with success."

It would seem that our American confrères have succeeded in detaining the celebrated Physiologist, Dr. E. Brown-Sèquard, on this side of the Atlantic. The Boston *Medical Journal* informs us that the trustees of Harvard University have established a chair of Physiology and Pathology of the Nervous System, to which Dr. Sèquard has been appointed. We congratulate the University upon this distinguished addition to their Medical Faculty.

There are now twice as many lunatics in England as there were fifteen years ago, there being now no fewer than 44,695. — It is a somewhat singular fact, that while Montreal was visited last winter with a severe epidemic of scarlet fever, which still continues to some slight extent, so also has London, England. An epidemic of this disease, more severe than has been known in London for twenty years, has prevailed there for the past eight months. — The British Pharmacopœia cost a little over £6000 sterling. The returns from sales have been a little over £5000. To meet the deficiency, there are in stock pharmacopœias to the value of £2800. — The Bengal government has issued an order that no more bodies are to be thrown into the river Ganges from the prisons and hospitals. — There is an old German proverb which says, "Physicians purge the body; theologians, the conscience; and lawyers, the purse."— Professor Goodsir, of Edinburgh, is in a very delicate state of health.— Dr. Bennett, Professor of Clinical Medicine at Edinburgh, who was obliged to cease his lectures last winter owing to ill health, has returned improved with his five months spent in the south of Italy. — Small pox is raging in Berlin, and the medical institutions of the city are crowded every morning with adults seeking re-vaccination.

The following somewhat singular resolution was adopted at the late annual meeting of the Ohio State Medical Society, amidst much applause: *Resolved*, That the thanks of this Society, as well as the good wishes of all the good citizens of the land, are eminently due to our venerable fellow-member, J. G. Rogers, M.D., of New Richmond, Ohio, for the skilful manner in which, on the morning of the 22d of April, 1822, he assisted into this world Ulysses Simpson Grant, the Commander of the American armies, the hero of Vicksburg, and the predestined destroyer of the great rebellion.

# MORTALITY OF THE CITY OF MONTREAL IN MAY, 1864.

*Compiled from the Cemetery Returns, by G. E. Fenwick, M.D.*

MOUNT ROYAL CEMETERY.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | .. | 2 | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 2 | .. |
| Senile Debility | 2 | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | .. | 3 |
| Infantile Debility | 3 | 2 | 5 | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 1 | .. | .. | 4 | 1 |
| Small Pox | 1 | 3 | 4 | .. | 2 | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 | .. | .. | 3 | 1 |
| Scarlet Fever | 7 | 6 | 13 | .. | 4 | 8 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 4 | 3 | .. | 3 | .. | 2 | 10 | 3 |
| Fever | .. | 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. |
| Inflammation of Brain | 3 | 4 | 7 | .. | 3 | 3 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 3 | 1 | .. | .. | .. | .. | 5 | 2 |
| Apoplexy | 3 | .. | 3 | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | .. | 3 |
| Paralysis | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 |
| Croup | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Hooping Cough | 1 | 2 | 3 | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | 3 | .. |
| Inflammation of Lungs | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 |
| Consumption | 4 | 6 | 10 | .. | 1 | .. | 1 | 5 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | 2 | 5 | .. | .. | .. | 9 | 1 |
| Disease of Heart | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| Asthma | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 |
| Diptheria | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. |
| Dentition | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 |
| Inflam. of Bowels | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Diarrhœa | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. |
| Disease of Liver | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| Dropsy | 3 | 1 | 4 | .. | .. | .. | 2 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | 2 | .. | 1 | 3 |
| Erysipelas | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| Accidental | 2 | .. | 2 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | 1 | 1 |
| Total | 37 | 31 | 68 | 2 | 21 | 13 | 6 | 7 | 5 | 4 | 2 | 1 | 5 | 2 | .. | .. | .. | 2 | 1 | 19 | 12 | 4 | 14 | 3 | 4 | 9 | 41 | 27 |

ROMAN CATHOLIC CEMETERY.

| Disease. | Male. | Female. | Total. | Still-born | Under 2 years. | 2 to 10 years. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Sœurs Grises. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 7 | 5 | 12 | 12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | 1 | 2 | 3 | 2 | .. | 1 | 12 | .. |
| Senile Debility | 6 | 6 | 12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 4 | .. | 4 | .. | 1 | .. | 10 | 2 |
| Infant. Debility | 33 | 22 | 55 | .. | 55 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | 5 | 3 | 3 | 7 | 6 | 7 | 7 | 54 | 1 |
| Small Pox | 23 | 24 | 47 | .. | 11 | 29 | 2 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 7 | 8 | 6 | 7 | 9 | .. | 7 | 37 | 10 |
| Scarlet Fever | 44 | 46 | 90 | .. | 30 | 60 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 15 | 18 | 5 | 16 | 15 | 8 | .. | 10 | 61 | 29 |
| Fever | 2 | 1 | 3 | .. | .. | .. | 1 | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | .. | .. | 3 | .. |
| Inflam. Brain | 2 | .. | 2 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | 1 | 1 |
| Apoplexy | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 2 | .. |
| Paralysis | 2 | 3 | 5 | .. | .. | .. | .. | 1 | .. | .. | 3 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | 1 | 1 | .. | .. | 5 | .. |
| Croup | 2 | 6 | 8 | .. | 4 | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | 3 | .. | .. | .. | 2 | 7 | 1 |
| Hoop'g Cough | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. |
| Inflam. Lungs | 5 | 2 | 7 | .. | 1 | .. | 1 | 1 | .. | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | 3 | 1 | .. | .. | 5 | 2 |
| Consumption | 10 | 10 | 20 | .. | .. | .. | 3 | 8 | 3 | 4 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 3 | 2 | 6 | 3 | 1 | 3 | 1 | 1 | 8 | 12 |
| Disease Heart | 2 | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 |
| Aneurism | 2 | .. | 2 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 1 | 1 |
| Asthma | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. |
| Dentition | 10 | 8 | 18 | .. | 18 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 3 | 1 | 2 | 5 | 2 | .. | 1 | 11 | 7 |
| Inflam. Bowels | 1 | 1 | 2 | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 2 | .. |
| Disease Liver | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| Dropsy | 3 | 5 | 8 | .. | .. | .. | 1 | 3 | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 3 | 2 | .. | 1 | .. | 1 | 6 | 2 |
| Erysipelas | 2 | .. | 2 | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 |
| Charbon | .. | 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. |
| Cancer | .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| Childbirth | .. | 2 | 2 | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | 1 |
| Accidental | 3 | 1 | 4 | .. | 2 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | 1 | .. | .. | .. | 4 |
| Total | 163 | 145 | 308 | 12 | 120 | 96 | 9 | 17 | 13 | 8 | 9 | 13 | 4 | 6 | 1 | .. | 2 | 1 | 3 | 42 | 44 | 34 | 43 | 49 | 38 | 19 | 33 | 231 | 77 |

# MORTALITY OF THE CITY OF MONTREAL IN JUNE, 1864.

*Compiled from the Cemetery Returns, by G. E. Fenwick, M.D.*

## Mount Royal Cemetery.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| Senile Debility | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | 1 | .. | 2 | .. | .. | .. | 1 | .. | 1 | 1 |
| Infantile Debility | 3 | .. | 3 | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 3 | .. |
| Small Pox | 1 | 4 | 5 | .. | 1 | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | 1 | .. | 4 | 1 |
| Scarlet Fever | 3 | 6 | 9 | .. | 3 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 5 | 2 | 1 | .. | .. | .. | 7 | 2 |
| Fever | .. | 1 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 |
| Inflammation of Brain | 5 | 4 | 9 | .. | 2 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 5 | 2 | .. | .. | .. | 1 | 8 | 1 |
| Apoplexy | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Paralysis | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Convulsions | 1 | 3 | 4 | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 2 | .. | .. | .. | 4 | .. |
| Croup | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. |
| Hooping Cough | 2 | 1 | 3 | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 1 | 3 | .. |
| Inflammation of Lungs | 1 | 1 | 2 | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 1 | 1 |
| Consumption | 5 | 2 | 7 | .. | .. | .. | .. | 3 | 1 | 2 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | .. | 2 | .. | 1 | 1 | 2 | 5 |
| Disease of Heart | 2 | 1 | 3 | .. | .. | 1 | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 1 | 1 | 2 |
| Diphtheria | .. | 2 | 2 | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. |
| Inflam. of Bowels | 3 | 2 | 5 | .. | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | 1 | .. | .. | 5 | .. |
| Diarrhœa | .. | 2 | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 2 | .. |
| Cholera | .. | 2 | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 1 |
| Dropsy | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. |
| Erysipelas | .. | 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 |
| Cancer | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Abscess | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. |
| Accidental | 2 | 1 | 3 | .. | .. | 2 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 1 | 1 | 2 |
| Total | 30 | 39 | 69 | 1 | 23 | 26 | .. | 7 | 2 | 3 | 2 | 2 | 3 | .. | .. | .. | 1 | 2 | 3 | 13 | 15 | 7 | 17 | 3 | 3 | 5 | 49 | 20 |

## Roman Catholic Cemetery

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Sœurs Grises. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 5 | 2 | 7 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | 1 | .. | .. | 1 | .. | 2 | 7 | .. |
| Senile Debility | 13 | 4 | 17 | .. | .. | .. | .. | .. | .. | .. | 1 | 5 | 10 | 1 | .. | .. | .. | .. | 1 | 2 | 6 | 5 | .. | .. | 2 | .. | 1 | 12 | 5 |
| Infant. Debility | 109 | 77 | 186 | .. | 186 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 14 | 14 | 6 | 14 | 20 | 11 | 88 | 18 | 170 | 16 |
| Small Pox | 35 | 31 | 66 | .. | 19 | 42 | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 8 | 14 | 3 | 16 | 10 | 6 | .. | 8 | 51 | 15 |
| Scarlet Fever | 21 | 22 | 43 | .. | 13 | 25 | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 3 | 14 | 5 | 4 | 5 | 5 | .. | 6 | 20 | 23 |
| Fever | 2 | 4 | 6 | .. | 1 | 1 | 1 | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 | 1 | .. | 1 | 5 | 1 |
| Inflam. Brain | 7 | 5 | 12 | .. | 2 | 9 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 3 | 1 | 2 | 3 | 1 | .. | .. | 8 | 4 |
| Apoplexy | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 1 | .. |
| Paralysis | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 1 | 1 |
| Croup | 6 | .. | 6 | .. | 2 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 3 | .. | .. | .. | 1 | .. | .. | 3 | 3 |
| Hooping Cough | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. |
| Inflam. Lungs | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Consumption | 14 | 17 | 31 | .. | .. | .. | 3 | 9 | 11 | 3 | 5 | .. | .. | .. | .. | .. | 1 | .. | 1 | 5 | 6 | 5 | 4 | 1 | 5 | .. | 3 | 13 | 18 |
| Disease Heart | 4 | 2 | 6 | .. | .. | .. | .. | .. | 1 | 1 | 1 | 3 | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 1 | .. | .. | .. | .. | 1 | 1 | 5 |
| Asthma | 1 | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | 1 | 2 | 1 |
| Dentition | 18 | 10 | 28 | .. | 28 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 3 | 6 | 3 | 7 | 4 | 2 | .. | 2 | 20 | 8 |
| Inflam. Bowels | .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| Diarrhœa | 3 | 1 | 4 | .. | 3 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | .. | 1 | .. | .. | .. | 3 | 1 |
| Disease Liver | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Dropsy | 4 | 3 | 7 | .. | .. | .. | 1 | .. | 3 | .. | .. | 3 | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | 1 | .. | 1 | .. | 2 | 5 | 2 |
| Childbirth | .. | 3 | 3 | .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | 1 | 3 | .. |
| Cancer | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Abscess | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. |
| Accidental | 4 | 2 | 6 | .. | .. | 1 | 1 | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | 3 | 5 | 1 |
| Total | 249 | 188 | 437 | 7 | 254 | 84 | 12 | 16 | 17 | 11 | 8 | 11 | 6 | 10 | 1 | .. | 4 | 1 | 5 | 45 | 75 | 32 | 50 | 49 | 37 | 88 | 51 | 332 | 105 |

# ABSTRACT OF METEOROLOGICAL OBSERVATIONS,

*Taken at the Montreal Observatory, Latitude* 45° 31′ *N. Longitude, 4h. 54m. 11s. W. of Greenwich. Height above level of the Sea* 182 *feet. For the month of May,* 1864.

BY CHARLES SMALLWOOD, M.D., LL.D., D.C.L.

| Day of Month. | Reading of the Barometer, corrected, and reduced to 32° F. | | | Reading of Thermometer. | | | Mean Tension of Vapor. | Mean Humidity of the Atmosphere. | General direction of Wind. | Horizontal movement in 24 hours in miles. | Mean extent of Clouds in 10ths. | Depth of Rain in inches. | Depth of Snow in inches. | Ozone in 10ths. | Weather, &c. | Remarks for the Month. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Highest | Lowest. | Mean. | Max. | Min. | Mean | | | | | | | | | | |
| | Inches. | Inches. | Inches. | | | | | | | | | | | | | |
| 1 | 29.642 | 29.574 | 29.613 | 51.0 | 43.0 | 48.8 | .326 | .910 | N | 118.00 | 6.6 | 0.063 | .... | 2.3 | Rain. | |
| 2 | .671 | .606 | .640 | 67.8 | 44.1 | 55.4 | .414 | .903 | S W | 100.40 | 3.3 | .... | .... | 1.6 | | |
| 3 | .568 | .530 | .549 | 67.4 | 40.2 | 44.6 | .279 | .891 | N E | 176.96 | 10.0 | 0.472 | .... | 2.6 | Rain. | |
| 4 | .810 | .587 | .692 | 54.3 | 34.3 | 49.8 | .279 | .844 | N by W | 285.26 | 6 6 | 0.686 | .... | 3.3 | Rain. | |
| 5 | .872 | .800 | .848 | 70.1 | 44.7 | 53.8 | .432 | .853 | W | 109.28 | 6.3 | Inapp | .... | 2.3 | Rain. | |
| 6 | .842 | .621 | .721 | 56.9 | 40.4 | 48.5 | .310 | .851 | N E | 186.05 | 10.0 | 0 221 | .... | 3.0 | Rain. | |
| 7 | .836 | .799 | .811 | 59.9 | 37.0 | 50.7 | .340 | .880 | N E | 220.56 | 9.6 | 0.220 | .... | 3.2 | Rain. | |
| 8 | .697 | .612 | .666 | 54.3 | 45.6 | 48.9 | .314 | .882 | N E | 70.41 | 10.0 | 0.163 | .... | 2.0 | Rain. | |
| 9 | .579 | .469 | .522 | 72.2 | 48.1 | 61.5 | .484 | .873 | N N E | 81.39 | 6.6 | .... | .... | 3.3 | | |
| 10 | .600 | .403 | .505 | 71.4 | 47.2 | 59.6 | .482 | .900 | S by W | 72.96 | 10.0 | 0.030 | .... | 2.0 | Rain. | |
| 11 | .784 | .764 | .773 | 53.7 | 35.0 | 46.6 | .281 | .927 | N E | 250.54 | 8·0 | 0.104 | .... | 3.0 | | |
| 12 | .750 | .598 | .687 | 50 2 | 42.0 | 47.2 | .311 | .912 | N E | 143.65 | 10.0 | 0.202 | .... | 3.0 | Rain Hail. | |
| 13 | .805 | .721 | .768 | 71.2 | 46.0 | 60 9 | .516 | .926 | N E | 143.61 | 8.6 | 0.792 | .... | 2.0 | Rain. | |
| 14 | .971 | .817 | .970 | 80.2 | 59.2 | 69.4 | .660 | .904 | S W | 63.62 | 6.0 | 0.014 | .... | 2.2 | Rain. | |
| 15 | .930 | .919 | .926 | 85.4 | 60.9 | 72.1 | .706 | .890 | N E | 134.00 | 4.0 | Inapp | .... | 1.3 | Rain. | |
| 16 | .867 | .802 | .847 | 84 7 | 58.1 | 71.3 | .675 | .861 | N E | 147.10 | 3.3 | .... | .... | 1.3 | | |
| 17 | .645 | .637 | .641 | 84.7 | 61.1 | 70.0 | .628 | .838 | N E | 94.71 | 1.3 | .... | .... | 1.0 | | |
| 18 | .726 | .717 | .720 | 79.2 | 51.0 | 66.8 | .591 | .852 | N E | 198.61 | 4.0 | .... | .... | 1.0 | | |
| 19 | .805 | .797 | .800 | 74.7 | 48.2 | 64.4 | .495 | .838 | S W | 142.04 | 8.3 | Inapp | .... | 1.0 | Rain. | |
| 20 | .638 | .619 | .627 | 64.2 | 50.4 | 61.0 | .452 | .843 | N E | 131.80 | 10.0 | Inapp | .... | 1.3 | Rain. | |
| 21 | .383 | .378 | .380 | 70.1 | 45 7 | 62.3 | .496 | .867 | N E | 62.59 | 8.3 | 0.291 | .... | 1.6 | Rain. | |
| 22 | .737 | .622 | .679 | 72.2 | 50 0 | 61.0 | .405 | .757 | N E | 106.40 | 2.0 | Inapp | .... | 1.3 | Rain, | |
| 23 | .668 | .647 | .659 | 63.0 | 43.0 | 56.8 | .366 | .787 | W | 180.40 | 6.0 | 0.442 | .... | 1.3 | Rain. | |
| 24 | .598 | .594 | .596 | 51.0 | 43.1 | 48.8 | .338 | .931 | N E | 159.36 | 10.0 | 0 242 | .... | 2.6 | Rain. | |
| 25 | .700 | .589 | .646 | 58.2 | 43.4 | 55.8 | .419 | .929 | N E | 220.78 | 6.0 | 0.240 | .... | 2.3 | Rain. | |
| 26 | .597 | .502 | .546 | 78.6 | 49.0 | 69.4 | .659 | .894 | N E | 117.41 | 10.0 | .... | .... | 3.6 | | |
| 27 | .500 | .354 | .418 | 80.1 | 53.0 | 69.8 | .634 | .871 | N W | 104.19 | 6 6 | 0.420 | .... | 3.3 | Rain. | |
| 28 | .700 | .627 | .673 | 69.5 | 50.9 | 59.2 | .460 | .884 | N by W | 189.28 | 2.0 | Inapp | .... | 1.3 | Rain. | |
| 29 | .832 | .659 | .747 | 74.0 | 49.6 | 60.5 | .482 | .876 | N E | 108.00 | 4 6 | .... | .... | 1.0 | | |
| 30 | .662 | .572 | .625 | 65.2 | 43.4 | 60.1 | .489 | .930 | N E | 120.00 | 6.6 | 0.170 | .... | 2.0 | Rain. | |
| 31 | .571 | .449 | .512 | 72.3 | 50.1 | 68.9 | .641 | .871 | W | 72.70 | 10.0 | 0.051 | .... | 2.0 | Rain. | |

Barometer .. { Highest, the 14th day, 29.971 inches.
Lowest, the 27th day, 29.354 "
Monthly Mean, 29.703 "
Monthly Range, 0.627 "

Thermometer { Highest, the 15th day 85° 4.
Lowest, the 4th day, 34° 3.
Monthly Mean, 61.79.
Monthly Range, 51° 1.

Greatest intensity of the Sun's rays, 113° 0.
Lowest point of Terrestrial radiation, 34° 7.
Mean of Humidity, .879.
Rain fell on 24 days, amounting to 4.823 inches, it was accompanied by Thunder on 1 day and Hail on 1 day.
Most prevalent wind, N. E.
Least prevalent wind, S. by W.
Most windy day the 4th day. mean miles per hour, 11.88.
Least windy day, the 21st day, mean miles per hour, 1.77.
Aurora Borealis visible on 2 nights.
Lunar Halo visible on 1 night.
Amount of Evaporation 1.81 inches.

# ABSTRACT OF METEOROLOGICAL OBSERVATIONS,

*Taken at the Montreal Observatory, Latitude* 45° 31′ *N. Longitude,* 4*h.* 54*m.* 11*s. W. of Greenwich. Height above the level of the Sea* 182 *feet. For the month of June,* 1864.

BY CHARLES SMALLWOOD, M.D., LL.D., D.C.L.

| Day of Month. | Reading of the Barometer, corrected, and reduced to 32° F. | | | Reading of Thermometer. | | | Mean Tension of Vapor. | Mean Humidity of the Atmosphere. | General direction of Wind. | Horizontal movement in 24 hours in miles. | Mean extent of Clouds in 10ths. | Depth of Rain in inches. | Depth of Snow in inches. | Ozone in 10ths. | Weather, &c. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Highest. | Lowest. | Mean. | Max. | Min. | Mean | | | | | | | | | |
| | Inches. | Inches. | Inches. | | | | | | | | | | | | |
| 1 | 9.714 | 29.661 | 29.688 | 74.2 | 53.0 | 66.4 | .539 | .842 | S W | 189.20 | 7.6 | Inapp | .... | 1.3 | Rain. |
| 2 | .724 | .714 | .719 | 83.0 | 49.0 | 64.5 | .487 | .792 | N E | 91.02 | 1.3 | .... | .... | 1.6 | |
| 3 | .591 | .574 | .581 | 66.4 | 44.7 | 57.5 | .388 | .799 | W | 148.89 | 3.3 | 0.030 | .... | 1.3 | Rain. |
| 4 | .701 | .669 | .681 | 85.1 | 46.0 | 69.3 | .618 | .831 | W | 75.52 | 0.0 | .... | .... | 1.0 | |
| 5 | .800 | .601 | .721 | 83.8 | 64.2 | 73.0 | .614 | .792 | W | 209.67 | 3.3 | .... | .... | 1.3 | |
| 6 | .674 | .354 | .467 | 83.4 | 55.0 | 74.7 | .625 | .735 | W | 200.04 | 4.6 | .... | .... | 1.0 | |
| 7 | .892 | .850 | .866 | 85.0 | 43.0 | 63 4 | .463 | .771 | W | 201.57 | 0.0 | .... | .... | 1.0 | |
| 8 | .754 | .420 | .652 | 65.2 | 43.0 | 62.1 | .424 | .760 | W | 92.36 | 10.0 | .... | .... | 1.3 | |
| 9 | .214 | .106 | .158 | 60.1 | 46.0 | 55.1 | .384 | .813 | W | 204.47 | 10.0 | 0.472 | .... | 1.3 | Rain. |
| 10 | .500 | .350 | .405 | 69.0 | 55.2 | 56.7 | .321 | .660 | W | 351.39 | 4.0 | .... | .... | 1.0 | |
| 11 | .800 | .651 | .716 | 72.1 | 55.4 | 60.6 | .331 | .670 | W | 119.16 | 5.6 | .... | .... | 1.0 | |
| 12 | .880 | .814 | .855 | 73.4 | 48.0 | 61.1 | .394 | .729 | N E | 234.30 | 2.6 | .... | .... | 1.0 | |
| 13 | .892 | .874 | .886 | 89.4 | 44.2 | 73.1 | .583 | .706 | W | 103.05 | 0.0 | Inapp | .... | 1.0 | Rain. |
| 14 | .792 | .741 | .759 | 91.0 | 52.7 | 73.1 | .583 | .706 | W | 138.50 | 0.0 | .... | .... | 0.6 | |
| 15 | .706 | .692 | .698 | 91.4 | 55.9 | 76.4 | .682 | .742 | W | 14.51 | 2.0 | .... | .... | 0.0 | |
| 16 | .614 | .602 | .606 | 92.0 | 59.0 | 79.3 | .702 | .697 | N E | 244.73 | 0.0 | .... | .... | 0.0 | |
| 17 | .800 | .714 | .758 | 94.7 | 60.0 | 78.8 | .659 | .660 | N E | 246.13 | 0.0 | .... | .... | 0.1 | |
| 18 | .830 | .814 | .819 | 96.7 | 60.5 | 83.5 | .770 | .678 | S W | 91.55 | 0.0 | .... | .... | 0.1 | |
| 19 | .819 | .816 | .813 | 96.2 | 66.4 | 83.9 | .772 | .666 | S W | 192.20 | 0.0 | .... | .... | 0.0 | |
| 20 | .862 | .850 | .851 | 89.2 | 68.4 | 77.7 | .687 | .773 | S W | 285.09 | 0.0 | .... | .... | 0.6 | |
| 21 | 30.045 | 30.011 | 30.029 | 89.8 | 59 2 | 77.1 | .706 | .784 | N E | 207.09 | 0.0 | .... | .... | 0.6 | |
| 22 | 29.927 | 29.794 | 29.878 | 92.4 | 69.3 | 80.5 | .769 | .709 | S W | 173.41 | 0.0 | .... | ... | 0.3 | |
| 23 | .784 | .633 | .716 | 76.9 | 66.0 | 73.7 | .652 | .797 | N E | 235.70 | 3.3 | .... | .... | 0.5 | |
| 24 | .759 | .654 | .723 | 77.0 | 59.0 | 73.4 | .636 | .784 | S W | 217.83 | 0.0 | .... | ..... | 0.3 | |
| 25 | .509 | .500 | .505 | 90.2 | 68.2 | 79.9 | .757 | .749 | W S W | 156.07 | 0.0 | .... | .... | 0.1 | |
| 26 | .477 | .344 | .423 | 92.3 | 71.1 | 73.9 | .739 | .754 | W S W | 114.92 | 2.6 | 0.374 | .... | 0.1 | Rain. |
| 27 | .821 | .605 | .680 | 80.0 | 59.0 | 67.0 | .561 | .822 | N E | 218.90 | 3.3 | Inapp | .... | 1.0 | Rain. |
| 28 | .947 | .937 | .940 | 80.4 | 52.2 | 67.1 | .535 | .770 | W N W | 214.61 | 10.0 | .... | .... | 0.6 | |
| 29 | .934 | .926 | .929 | 91.0 | 54.0 | 74.0 | .673 | .779 | W | 427.80 | 0.0 | .... | .. . | 0.0 | |
| 30 | .718 | .617 | .674 | 82. | 54.2 | 73.8 | .656 | .794 | W | 234.20 | 1.3 | .... | .... | 0.6 | |

Remarks for the Month.

Barometer ... Highest, the 21st day, 30.045 inches.
Lowest, the 9th day, 29.106 "
Monthly Mean, 29.703. "
Monthly Range, 0.939. "

Thermometer Highest, the 18th day, 96° 7.
Lowest, the 10th day, 35° 2.
Monthly Mean, 70.01.
Monthly Range, 61° 5.

Greatest intensity of the Sun's rays, 118° 4.
Lowest point of Terrestrial radiation, 33° 4.
Mean of Humidity, .703.
Rain fell on 6 days amounting to 0.876 inches.
Most prevalent wind, W.
Least prevalent wind, S. W.
Most windy day, the 29th day, mean miles per hour, 17.82.
Least windy day, the 15th day, mean miles per hour, 0.60.
Amount of Evaporation, 247 inches.
Aurora Borealis visible on 2 nights.

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*On the Administration of Chloroform.* By FRANCIS W. CAMPBELL, M.D., L.R.C.P., London; Member Royal Medical Society, Edinburgh, and of the Dublin Microscopic Society, Physician to the Montreal Dispensary and Infirmary for Diseases of Women and Children.

There can be no doubt that the administration of chloroform should be entirely confined to those who have had a regular medical education, and who are legally entitled to practise. The idea entertained by many that the management of the inhalation of chloroform vapor is one where no science is required, is as wrong as it is pernicious; not that death from this anæsthetic will not occur even in the most skilful hands, but that the danger may be reduced to its minimum. He that has entrusted into his hands an agent, which may, almost without a moment's warning, bring about dangerous symptoms, should be able to view the situation with calmness, and put into immediate requisition all the latest known means for resuscitation. How is this to be accomplished if the operator is unskilled, uneducated for the position he attempts to fill? I am led to make these remarks from the occurrence of a fatal case from the administration of chloroform, in the town of Port Hope, in the commencement of August last. From the evidence taken at the inquest it appears that a Mrs. Robinson was desirous of having seven teeth extracted, and for that purpose visited the office of Messrs. Waid and Watrass. She was placed in the chair, and a Mr. Chambers, who was present, proceeded to administer chloroform. As regards the mechanical means used for its administration no fault can be found; but we have no evidence to show that the condition of the patient was being closely watched while the anæsthetic was being inhaled. Who was noticing the pulse, the respiration, the eye—all essential safeguards to be attended to in its administration?

Nor do we learn that the patient was allowed the proper quantity of atmospheric air. At all events she was chloroformized, and Mr. Chambers, leaving his duty of administrator, turned dentist, and extracted seven teeth. Mr. Waid then extracted two, and as the last one was pulled out, she made a noise. She was told "to spit into the bowl," and leaned her head over, but was unable to raise it. In two minutes she was dead. Now comes the worst part of the case; what was done to resuscitate the patient? Mr. Waid evidently knew sufficient to pull the tongue forward: but the unfortunate woman was kept in a *sitting posture* for some time, *while ammonia and whiskey were administered to her;* she was then partially laid on the floor, *her head leaning against a chair.* These certainly were not the means that should have been made use of. No attempt whatever seems to have been made to apply artificial respiration, which, according to every authority on the subject, is the very first thing to be done. At the inquest no *post mortem* was allowed, and therefore we can gain no information as regards the internal condition; but several medical men, whose evidence was taken, stated that Mrs. Robinson had suffered from "disease of the heart" for some time. This term is very vague, and is very often too loosely applied by those who should know better. It would be interesting to know the particular lesion which existed in the heart. What are the qualifications possessed by this Mr. Chambers that he should be allowed to undertake the administration of chloroform? Simply these: I quote from his own evidence. "He had superintended the inhalation of chloroform a great many times without any ill effect, and did not recognize any difference in the subjects; he had studied medicine six months at Ann Arbor College, Michigan, and, a year previously, with a physician; and he held a diploma from that college. I know nothing of this Ann Arbor College; but any institution granting a diploma simply after six months' attendance on its lectures, I consider unworthy of being recognized as a school of medical education. Unfortunately our neighbors of the United States have too many institutions of this kind, which flood not only their own country but ours with hosts of utterly incompetent men, who attempt the practice of the healing art. If Mr. Chambers had had but the most elementary knowledge of the art which he pretends to follow, he certainly never would have kept the unfortunate woman in an erect position, and attempted the administration of liquids. This is a serious case, and I think that all concerned are deserving of exemplary punishment.

I cannot close this article without referring more at length to resuscitation of persons from chloroform accidents,—a subject which deserves the fullest investigation. Unfortunately, so far, the success which has

attended such efforts has not been encouraging, yet we would fain hope that the time is not far distant when they may be more so. Dr. Charles Kidd, of London, an able authority on this subject, has recently published a most important paper on chloroform accidents. He states that he has made a great many experiments on animals with chloroform, and that he has come to the conclusion that death is not the result of "cardiac syncope," or "paralysis of the heart," but rather to narcotism, or paralysis of the voluntary respiratory nerves and muscles, which, in a secondary manner, induced, as a *post mortem* result, this so-called state of cardiac syncope. Dr. Kidd calls this new state muscular apnœa. Reasoning from various facts, he leans to the belief, that under chloroform, the heart itself is never attacked with sudden paralysis. At *post mortem* examinations, in deaths from chloroform, the right heart is generally found gorged with blood. Dr. Kidd claims that this is a secondary condition, the primary one being the inability of the lungs—owing to paralysis of the voluntary muscles—to receive it, hence the accumulation in the heart, which has been vainly trying to send it forward. To prove his case, he states that patients under chloroform generally struggle violently as if suffocating, and that when the alarm of an accident occurs, the patient's limbs are rubbed in the course of the veins, all tending powerfully to engorge the right side of the heart.

"It is against the analogy of the action of chloroform, so peculiarly confined to muscles of the voluntary kind, that it should act on the heart. It is contrary to all clinical observation of the pulse and action of the heart in thousands of hospital cases deeply narcotized, the pulse being almost always increased in volume and strength. Again, before taking chloroform, the pulse is often almost imperceptible and slow, with an equally feeble heart, but both improve in force and number of beats, as the narcotism of the chloroform becomes more and more advanced."

Having, as he believes, demonstrated that it is the lungs and not the heart that are at fault, he recommends that electricity be applied to the diaphragm, respiratory muscles, phrenic nerves, &c., so as to assist or originate the only true form of artificial respiration so desirable. In animals this acts like magic, and is applied as follows: "An intermittent but gentle current, is passed through the phrenic nerve—where the omo-hyoid muscle lies *in the neck*, at the outer edge of the sterno-mastoid—by means of a wetted sponge, the other pole—sponge, also—applied somewhere about the floating rib nearest to the diaphragm, or, still better, one or two acupuncture needles stuck at once into the latter muscle, so as to excite alternate action of the current from the neck to the respiratory muscle, and imitate normal respiration."

This certainly seems a plan worthy of the most serious consideration, and I think it should be tried when, unfortunately, an opportunity presents itself. With present means our success is *nil;* perchance with this it may be encouraging. Dr. Kidd has himself tried it with wonderful results in one human subject; and I cannot conclude this article better than by copying his account of it.

" The patient was a poor married lady, otherwise in fair health, admitted to one of our private hospitals or 'homes,' who was operated on by one of the plastic operations on the female organs, so successful of late, thanks, too, in a great measure, to the calming influence of chloroform. Near the end of the operation, the author (Dr. Kidd), who watched the respiration and pulse all through its performance, was alarmed by both stopping, then going on again, but finally stopping with all the usual signs of death by chloroform: the woman, in fact, lay in a state that it might be said death had obviously set in; she was cold, pulseless, without motion or breathing, her face like stone. The utmost alarm was instantly felt. The so-called " ready method " of Marshall Hall, as also the Sylvester method of artificial respiration, were persistently had recourse to; still there was no pulse, no breathing, no animation. The lifeless or all but lifeless body, in a word, lay, as many of the animals poisoned by chloroform are seen to lie, till roused up by electricity. The author of the paper sent at once for the magneto-electric battery. Some confusion arose at first in its application, as the handles or poles were not insulated, and the author himself was receiving the shocks, till a German physician, standing by, happily caught the metallic handles with his coat-tails (non-conductors). This little incident is mentioned to show how totally unprepared for such accidents our London hospitals are. All the persons standing by, too, were solicitous that the electricity should be applied at once to the *heart* (error No. 2); but the directions of the author were not to the heart at all, but to the phrenic nerve and diaphragm. The poor patient had now been lying some quarter of an hour pulseless, cold and without breath, indeed pronounced " dead." Off and on alternately, the moist poles were now applied about twelve times each minute, so as to imitate in somewise the stimulus of ordinary contractions of the diaphragm; and soon, to the delight of the operator and all around, a deep sighing inspiration was noticed at each break of the circle (this was a great relief), increasing in fulness till it was evident good respiration was established. No pulse, however, was yet perceptible, and cardiac action was still watched for with much eagerness. Minutes on minutes passed away as hours; the patient moaned at the excitement of the phrenic, and a pin stuck into the diaphragm (the author's scarf-pin, as no

other was to be had); but still it was thought desirable to continue the application of the electricity; there was soon a flicker of the pulse, but not till the expiration of two hours was the pulse quite re-established. It is worth being added, that the woman quite recovered, and had no recollection whatever of the four hours her life was in the balance and under the surgical operation. The case is chiefly remarkable as fully bearing out the efficacy of this form of electricity, and applied only in this manner, as previously tried in hundreds of experiments on the lower animals."

I may mention that Dr. Kidd states this method of resuscitation is applicable to all forms of apnœa, whether from drowning, suffocation in coal pits, or still-born children.

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*Case of Carotid Aneurism perfectly cured by starvation, rest and Iodide of Potassium.* By S. C. SEWELL, A.M., M.D., L.R.C.S.E., Ottawa, C.W., late lecturer on Materia Medica and Clinical Medicine, McGill University.

The great interest of this case lies in the return of the artery to its normal state, those reported by Dr. Robertson and others, having remained as far as I understand their statements, distended with coagulum. In order to save repetition, I now state the regions affected, with the abbreviations I shall use. The space bounded by the clavicle, trapezius and sterno-mastoid muscles, I call the lower triangle, designated as L. T. The space bounded by the sterno-mastoid, the trachea and inferior edge of the lower jaw, is my upper triangle, or U. T.

On the ninth of March, 1864, Michel Dorval, hewer, æt. 24, having just returned from the shanties, applied to me for tumor on the neck that interfered with his breathing, and complained of the annoyance caused by the pulsation. Examination of the right side of the neck revealed a diffuse swelling occupying the whole of the L. T., and the U. T. as high as the hyoid bone. On applying the hand, strong pulsation with aneurismal thrill was manifest. The stethoscope revealed an impulse like that of an enlarged and hypertrophied heart; and the cordal sounds were louder than over the region of the heart itself. The swellings could be made to disappear by pressure. There was no hesitation in arriving at the diagnosis that this was sacculated aneurism of the whole of the common carotid, also that it was incapable of cure by operation. Before the discovery of the coagulating properties of iodide of potassium, or little more than two years ago, I could only have let my patient die. Having some thirty-three or thirty-four years ago seen at La Charité in Paris, the beneficial effects of starvation and rest in retarding the progress of a

case of aortic aneurism, I determined to conjoin these with iodide of potassium internally. I enjoined absolute rest in bed, allowed eight ounces of *white* bread and one pint of water per diem, and ordered five grains of iodide of potassium in an ounce of water three times a day. Now for the progress of the case, which I saw at intervals of three days, and I would draw especial attention to the rapidity of the improvement, and the total disappearance of the aneurism. In three days, on the 12th, the swellings had perceptibly subsided, and the dyspnœa was much relieved; the history of that in the U. T. may be disposed of in a few words: it subsided gradually and uniformly for fifteen days, at the end of which time no aneurism could be distinguished. The rest of my remarks apply to that in the L. T.; on the 18th, from being a diffuse shapeless swelling, it had contracted to the size of a large hen's egg, dipping under the sterno-mastoid muscle, much firmer, impulse and sounds diminished. 24th. Reduced to the size of a walnut. April 1st. Size of a pigeon's egg. 6th. Size of a large hazel nut. 21st. All trace of aneurism gone. It is worthy of notice, that the aneurism regularly diminished from above downwards, and without inwards, so that when it was reduced to the size of a hazel nut, the finger had to be pushed under the cloidal insertion of the sterno-mastoid and close to the clavicle in order to feel it. I have no doubt that there were two sacculi, one filling the U. T., the other and the larger the L. T.

On the 1st April, the diet was increased to 12 oz. bread, half pint milk, and a pint of water. 6th April, allowed to get up. 21st. Released from all restraint as to diet or exercise. He was directed to continue the iodide of potassium for two months longer as a precaution. I next saw him on the 15th May, when he had recruited his strength very much, and left for home. I heard of him up to 25th August; he wrote that there was no sign of the disease returning. I am firmly of the opinion, that had not scant diet and absolute rest been conjoined with the iodide of potassium, no such successful result as now detailed would have been obtained. It would be a great satisfaction to me to hear of the same plan being pursued in cases of aneurism in other parts, *e. g.*, popliteal aneurism, when the application of a starch bandage would ensure perfect rest to the limb, not omitting, however, the recumbent posture. Of course, there was considerable loss of weight, but the emaciation was confined almost entirely to the muscles. Before taking to bed, the patient's muscles were hard and salient; but at the end of three weeks, when the diet was first increased, the limbs were round and soft like a woman's, but not much diminished in size, and the skin had the waxy watery appearance of oligomia. The explanation seems to be this: the tempe-

rature of the room, according to French Canadian custom, being always 78° or 80°, there was little call on the lungs to keep up the animal temperature; absolute rest being enforced, a minimum of ærated blood was required by the muscles, so that the lungs required a very small quantity of fuel, which was almost all supplied by the starch of the bread, thus very little fat was required. We know that under starvation, or a deficient supply of food, the azotized and phosphorized materials of the blood disappear very rapidly, and the waste can be made up only from the muscles.

The selection of white bread instead of brown, was made expressly because it is so much less nutritious to the blood, containing only a fractional portion of phosphorus, which is found almost entirely in the bran.

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*A new Ophthalmoscope for photographing the posterior internal surface of the living eye.* By A. M. ROSEBRUGH, M.D., Toronto.

CONSTRUCTION:—THE TUBES.

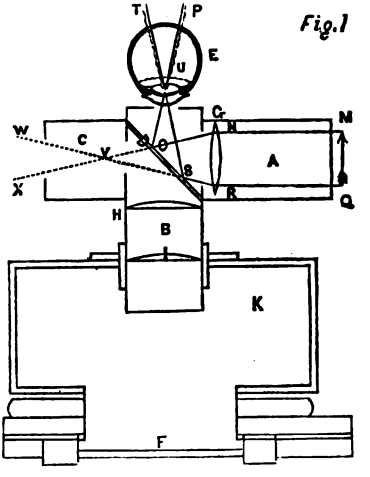



Fig. 1.

This instrument consists of a small photographic camera, to which are adapted two brass tubes (A and B) which meet each other at right angles (fig. 1), 1½ inch in diameter, being respectively 4 and 2½ inches in length. The longer tube B moves freely in the aperture of the camera, and the shorter tube A is turned towards the source of light.

A tube of the same width C, 1½ inch in length, is joined to the side

of the outer extremity of the tube B, opposite to and in a line with the tube A. The outer extremity of the tube B extends one-fourth of an inch beyond its juncture with the tubes A and C, and is terminated by a thin brass diaphragm having a central circular aperture of three-eighths of an inch in diameter.

At the juncture of the tube A with B there is a circular aperture of one inch diameter, and between C and B an aperture of half an inch diameter—affording a communication between A and C through B.

### THE PLATE GLASS.

At the juncture of the tubes there is placed an elliptical piece of highly polished thin plate glass with parallel surfaces, which is inclined at such an angle to the tubes, that a portion of a ray of light falling upon it through the centre of the tube A, from the direction M Q, is reflected at right angles to its original direction, and in the same plane with the centre of the tube B, which will be through the centre of the aperture in the diaphragm. A portion of the ray will be refracted by the plate glass, and pass through the tube C parallel to its original direction.

### THE LENSES.

At the inner extremity of the tube A, and as close as possible to its juncture with the tube B, a double convex lens G is placed $1\frac{1}{4}$ inch in diameter, and having a focus of $2\frac{1}{2}$ inches. In the corresponding position of the tube B, or close to the plate glass reflector, the lens H is placed, convexo-plane, of 5 inches focal length: $1\frac{3}{4}$ inch from this is another lens also convexo-plane, and having a focal length of 5 inches, and having the same diameter, viz., $1\frac{1}{4}$ inch.

### THE CAMERA.

The camera consists of a mahogany box 3 inches square and 7 inches high, having (to secure steadiness) a base 6 inches square.

At the aperture in the centre of the anterior side there is a brass collar fitted, through which slides the tube containing the lenses. At the opposite side of the camera is a central aperture $2\frac{1}{2}$ inches square, behind which is a slide with a piece of ground glass $2\frac{1}{2}$ inches square. This slide moves in grooves for the purpose, and can be removed to make way for a slide containing a sensitized plate also about $2\frac{1}{2}$ inches square.

### PHOTOGRAPHING.

As yet I have not attempted a photograph of the retina of the human eye, but have confined my experiments to the lower animals, and I have used solar light only in order to shorten the time as much as possible, but I do not doubt that diffused light, particularly that reflected from

a bright cloud, would, with a longer "exposure," answer very well. In using the instrument for this purpose, a table of the ordinary height is placed near a window, where the light of the sun falls upon it. It is well to have the shutters closed, and a beam of solar light admitted of the size of the illuminating tube; but this is not absolutely necessary, if precautions are taken to prevent diffused light entering the camera, and the ground glass is shaded while examining the image on its surface.

The camera is turned at right angles to the source of light, and the tube A or illuminating tube turned so that the light falls full into the tube, and is incident upon the whole of the lens G.

When the camera and tube are in proper position, a cone of light issues from the end of the camera tube through the centre of the aperture in the diaphragm, which is the condensed light from the lens G, reflected from the plate glass D. This cone forms a focus about half an inch outside the diaphragm, which can be seen by holding a thin piece of white paper near the diaphragm. In photographing the eye of a cat, I found it necessary to put it under the influence of chloroform, but the image of the optic nerve, vessels, &c., upon the ground glass is so very bright and clear that I do not doubt, if the most sensitive process be adopted, the impression could be taken instantaneously, thus rendering anæsthesia unnecessary.

### POSITION.

In either case the eye is brought to the proper position, and the eyelids held apart by an assistant. If it is the eye of a patient to be photographed the instrument is mounted upon its case, eight inches high, which, for most persons, gives it the right height. The patient being seated upon a chair, as close as possible to the table, leans forward towards the camera, and brings his eye as near as possible to the aperture in the diaphragm, the brow rests lightly against the end of the tube, and by bringing the elbows upon the table, he, with the palms of his hands, extemporizes a very good rest for his chin.

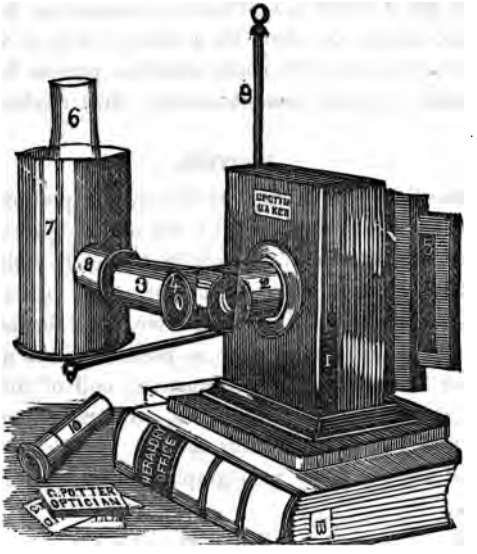
The pupil of the eye to be photographed must be previously dilated with atropine.

### PROCESS.

When the instrument is in its proper position, and the light from the plate glass enters the dilated pupil, the fundus of the eye is brilliantly illuminated, and its reflection passes out of the eye and through the plate glass and lenses, and forms an inverted image upon the ground glass at the back of the camera, where the observer in the rear can see the optic nerve entrance, distribution of the arteries and veins, &c., beautifully depicted, but magnified about four diameters. If the details of the image are not

perfectly defined, the camera tube is moved backward and forward until the proper focus is obtained. This image can be seen by the observer again very much magnified by placing to his eye a lens of say six inches focal length, and bringing his eye with the lens to within six inches of the ground glass, but the image will be seen even better by moving the ground glass to one side—the observer will then see the *aërial* image of the reflection from the eye, which will occupy the same position as the ground glass previously occupied. In photographing, the slide containing the ground glass is removed, and a slide substituted containing a plate glass "prepared" by the ordinary collodion process. An "exposure" of about five seconds is sufficient. If the "developing" proves that a good "negative" has been obtained, it is "fixed," and used for printing the photographs; if not, other plates are used until a more satisfactory result is obtained.

AS AN OPHTHALMOSCOPE.




*The position of the instrument when the light is supplied by a lamp:*—1, the camera; 2, camera tube; 3, illuminating tube; 4, diaphragm with central aperture; 5, slide with ground glass, 6, glass chimney of lamp; 7, brass tube four inches in diameter, which acts as a shade, and from which projects 8, a brass collar opposite the flame of the lamp, and to which is adapted 3, the illuminating tube of the instrument; 9, upright of the lamp stand; 10, eye-piece containing a camera lens of three inch focus to be adapted to the free extremity of the camera tube: when the eye-piece is used the camera is dispensed with.

In using this instrument as an ophthalmoscope, that is, for examining the interior of the eye, artificial light is used. The light from a kerosene oil lamp answers very well, but the best light for ophthalmoscopic purposes is from the gas-argand-burner, and the most convenient is the movable table lamp, supplied with gas through a flexible tube. The evening is the best time for making these examinations: if in the day time, the room is darkened. The instrument is placed in the same position in regard to the light as when solar light is used, but the flame of the lamp is brought within two or three inches of the entrance of the illuminating tube, and the two are placed on the same horizontal line. A screen, to shade the ground glass and the observer's eyes, is placed between the light and the back of the camera; or what I have found to be much better, a metallic tube or shade is placed around the lamp, from an aperture in which projects a collar somewhat resembling that of a magic lantern, of the right size to allow the illuminating tube of the instrument to fit closely. Indeed with this apparatus the camera can be dispensed with, that is, in making examinations of the eye simply; but when the object is to demonstrate the fundus of the eye to a number of persons the camera is used both with and without the ground glass.

I have recently had constructed a modification of the above instrument, which I find to be very convenient.

It shows the fundus of the eye of the cat or dog beautifully, but it remains to be seen whether the illumination is sufficient for examining the fundus of the human eye.

The light is supplied by an ordinary coal oil lamp, which is placed in a box about six inches square and fifteen inches high. Opposite the flame of the lamp there is an aperture in one side of the box, from which projects a brass tube or collar, to which is adjusted the illuminating tube of the instrument.

In the outer, or camera tube, is a double convex lens of two-inch focus, instead of the two lenses of five-inch focus each. At the outer extremity of this tube a movable eye piece is attached three inches in length, and containing a convex lens of three-inch focus.

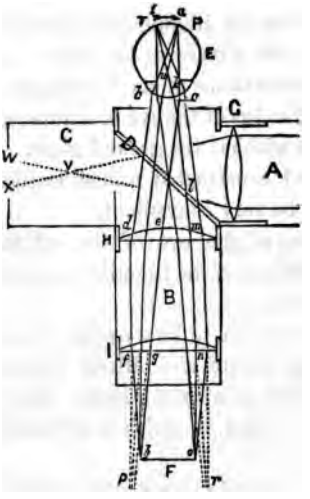
## OPTICS.

1st. *Illumination:*—Let MQ (fig. 1) represent parallel rays of solar light incident upon the double convex lens G: at the points NR they are refracted, and emerge from the lens convergingly towards a focus V in the tube C, but at O and S they are intercepted by the plate glass D, a portion of the rays are reflected by its polished surface in the direction E, and rays not reflected or absorbed are transmitted and pass to

form a focus at V—the principal focal distance of the lens G, and again diverge in the direction WX. The rays reflected from the surface of the plate glass form a focus at U (which is also the focal centre of the eye E), at the same distance in front of the plate glass D as V is behind it; these rays again diverge and illuminate a portion of the fundus at TP.

2nd. *Reflection:*—Let E (fig. 2) represent the same eye illuminated as just described; D the plate glass; and HI the lenses in the camera tube. Rays from any portion of the illuminated fundus as *a*, are reflected from the fundus, and emerge from the cornea at *bc*, the width of the dilated pupil, and proceed to the plate glass D, parallel, where some of its rays are reflected from the plate glass through the lens G in the direction of the source of illumination, but other rays proceed to *de*,

*Fig.* 2.




where they are incident on the lens H, by which they are refracted, and they would proceed to a focus at the principal focal distance of the lens H (viz., at P at five inches); but they are again intercepted at *fg*, by the lens I, which refracts them to an earlier focus, at *h*. In the same way rays from *i*, on E's retina, proceed from the cornea parallel to the axis *ikm*, and are also refracted by the lenses H and I, and are brought to a focus at *o*. In like manner all points intermediate between *i* and *a*, on E's retina, are reflected from the fundus, and refracted by the lenses forming an inverted image of *ia* at *oh*, which is received upon the ground glass placed at F.

### ADVANTAGES.

The advantages I claim for this instrument are:

1st. The simplicity of its construction, taking into consideration its two-fold purpose, namely, as an ophthalmoscope and as a photographing instrument. My friend, Dr. Noyes, of the New York Eye Infirmary, constructed an instrument for photographing the fundus oculi, and which was, I believe, to a considerable extent successful, but its construction was too complicated, and the instrument too expensive to be generally adopted. Dr. Noyes' instrument is constructed somewhat on the principle of the binocular microscope. Any good optician can construct this new instrument. The one I exhibited to the Institute was made by Charles Potter, No. 20, King-street East. They can be had complete for $10.

2nd. The limited experience necessary in order to use it successfully. The ordinary Ophthalmoscope requires months of practice before it can be used satisfactorily.

3rd. Being able to see the aërial image free from reflections from the object lens, which reflections are serious obstacles to beginners.

4th. Being able to receive the image either of a healthy or diseased fundus upon a screen of ground glass, which can be seen by a number of persons at the same time, and can be taken advantage of by gentlemen lecturing upon the physiology of the eye, or upon the pathology of its deep structures.

5th. With it, artists will be enabled to make colored diagrams of the internal eye, which, with the instruments now in use, has never yet been effected; thus Mr. Hulke, in his Treatise on the Ophthalmoscope, and Jabez Hogg, in the preface to his Manual of Ophthalmoscopic Surgery, June, 1863, apologising for the imperfections of the diagrams illustrating their works, state that it is impossible to procure the services of artists having the requisite knowledge of the use of the Ophthalmoscope.

6th. With this instrument I have demonstrated that photographs can be taken showing the details of the fundus of the eye.

In conclusion I would express the hope that the invention of this instrument will contribute something towards popularising Ophthalmoscopy, as, in investigating diseases of the eye, the Ophthalmoscope is undoubtedly even more essential than the Stethoscope in diagnosing diseases of the heart or lungs; and I trust its use will aid in banishing from ophthalmic nomenclature the indefinite term of amaurosis, where, as Walther observed, "the patient and physician are both blind."

# REVIEWS AND NOTICES OF BOOKS.

*A Treatise on Human Physiology.* Designed for the use of Students and Practitioners of Medicine. By JOHN C. DALTON, Jun., M.D., Professor of Physiology and Microscopic Anatomy, in the College of Physicians and Surgeons, New York, &c., &c., &c. Third edition, revised and enlarged. With two hundred and seventy-three illustrations. Philadelphia: Blanchard & Lea, 1864, 8vo. pp. 706. Dawson Bros., Montreal.

That a third edition of this work should be called for in so short a period since its first publication, is the most satisfactory proof the author can have, that the profession appreciate the result of his labors, and of the high esteem in which his book is held. Indeed after so convincing a proof of its excellence, little is necessary in its praise.

The arrangement of the work is excellent. The facts and theories put forward in it are brought up to the present time. Indeed, it may be looked upon as presenting the latest views of physiologists in a condensed form, written in a clear, distinct manner, and in a style which makes it not only a book of study to the student, or of reference to the medical practitioner, but a book which may be taken up and read with both pleasure and profit at any time.

In chapter XIV, on the circulation, that portion devoted to the consideration of the sounds of the heart, and their causes, we find, page 274: "The cause of the second sound is universally acknowledged to be the sudden closure and tension of the aortic and pulmonary valves." Further down on the same page we find:

"The production of the first sound has been attributed by some writers to a combination of various causes, such as the rush of blood through the cardiac orifices, the muscular contraction of the parietes of the heart, the tension of the auriculo-ventricular valves, &c. We believe, however, with Andrey and some others, that the first sound of the heart has a similar origin with the second, and that it is dependent altogether on the closure of the auriculo-ventricular valves."

We think that it is universally admitted that the cause of both sounds is the tension of the auriculo-ventricular valves for the first, and of the aortic and pulmonary valves for the second; and that the difference in the two sounds is produced by the difference in the sizes of the valves. We do not think that the mere closure of these valves assists in producing

the sounds, but that the sound is due entirely to their sudden tension. With regard to the second sound, the cause has been recognized for some time to be the tension of the semilunar valves.

With regard to the first sound, we think that the question of its cause was set at rest most completely by the experiments of Dr. Brachan of Dublin, with a bullock's heart, in which, by an ingenious arrangement of bladders attached to the apex of the left ventricle and to the aorta, and partially inflated, he, by alternated pressure on the two bladders, simulated circulation, and produced the two sounds just as if heard in the live animal. And the experiments of Dr. Halford of London on the living animal—the dog—in which he gave chloroform to the animal, introduced bellows into the trachea for the purpose of artificial respiration, then removed the sternum and the cartilages of the ribs, laid bare the heart, and then compressed the venæ cavæ and the pulmonary veins by means of small clips, the heart continued to beat but without sound, because from the absence of blood the valves were prevented from becoming tense on allowing the blood to flow into the heart, the sounds were immediately re-produced. Accounts of these experiments were published in the London Lancet in the years 1849 and '51.

We do not agree with our author when he says at page 272 and 3, "Together with the first sound of the heart, there is also to be heard a slight friction sound, produced by the collision of the point of the heart against the parietes of the chest." We object to the word collision as a word implying a separation of the heart from the parietes of the thorax, and a distinct blow given to the interior of that cavity. We look upon this friction sound as the result of the friction of the surface of the heart against the parietes of the thorax at the time of contraction of the muscular fibres of that viscus. There is an impulse against the parietes of the thorax at the moment of contraction, but no collision, inasmuch as there is no separation between the surfaces.

Just as if a man when firing off a gun, do but hold the butt thereof tight in against his shoulder, he receives only an impulse; but if he separate the butt end only for the slightest space from his shoulder, he receives a severe blow and a consequent bruise. So if there were a separation of the apex of the heart from the parietes of the thorax, and a constant series of collisions between them, inflammation would soon be the result. We commend, however, this work strongly to the notice of the medical profession as useful to the student, as a reliable work to study, to the practitioner as a book of reference, and as a delightful recreation from the labors of practice.

*The Principles and Practice of Obstetrics.* Illustrated with one hundred and fifty-nine Lithographic figures from original Photographs, and with numerous wood-cuts. By HUGH L. HODGE, M.D.; Emeritus Professor of Obstetrics and Diseases of Women and Children in the University of Pennsylvania, &c., &c. Philadelphia: Blanchard & Lea. 1864. 4to. pp. 550.

Science, in all her branches, appears to be making rapid advances, and the science of obstetrics is not behindhand. Obstetrics was a few years ago regarded as an art to be alone practised by old women, but prejudice is fast giving way to necessity, and we find the accoucheur taking rank among his fellows. It was to the exertions of Ramsbotham and others, about the year 1826, that the Council of the Royal College of Physicians was forced to recognize the chair of obstetrics as essential to their curriculum. Our American neighbors were in advance of the prejudices of scientific men as regards obstetrics, for on reference we find that, under date of October, 1813, the Board of Trustees of the University of Pennsylvania—the oldest medical school in America—passed a law whereby it was "Resolved that hereafter the professor of midwifery shall be a member of the medical faculty, and shall have all the powers, authority, and privileges belonging to a professorship in the said faculty; and that no person shall be admitted hereafter as a candidate for the degree of doctor of medicine in this university unless he shall have regularly attended two full courses of lectures on this subject."

The laborers in the field of obstetrics were few and far between; nevertheless, in spite of all prejudice, it ranks now as the first for usefulness and benefit to the human family. Many able and voluminous volumes on this subject have been given to the world, still there is room, and ever will be, for a work hailing from the pen of a veteran of the profession, one who like the author has already given his own most valuable and original observations. We refer to Dr. Hodge's work on "Diseases Peculiar to Women."

The book before us is divided into twenty-seven chapters, the first seven of which are devoted to the consideration of the obstetric pelvis; the fœtus, anatomically and relatively considered; the tissues and organs of the pelvis; gestation; symptoms of pregnancy; management of pregnant women, and labor. This part of the work contains all the known physiological questions which have any bearing on the subject, and also the more recent opinions of authors both at home and abroad. The chapter on gestation is most thorough in all particulars, giving a clear insight into the wonderful changes which occur consequent on impregnation. We are told that "Fecundation consists in the respective germs from the male and the

female meeting each other, when, in consequence of a mutual action or reaction or positive union with each other, a new or compound vesicle is produced. This new vesicle is endowed with those mysterious vital powers which give it a separate existence from its parents, and by which it is gradually evolved and developed from the rudimentary imperfect formation, through all the stages of fœtal existence to that of the perfect child." This chapter concludes with some excellent remarks on superfœtation.

Chapters eight to eleven are devoted to the consideration of Eutocia or natural labor. This is a most important department of the science of obstetrics, and one too frequently neglected. In fact it was asserted by Dr. Denman, over half a century ago, that "natural labor was the last thing studied in England." Great differences of opinion exist among accoucheurs on this subject, even in the present day; there are no two works in which the student will not find considerable variety on the subject of natural labor. The author draws a marked distinction between the terms presentation, and position, the former having reference to that part of the fœtal ellipse which is found forcing its way to the outer world; the latter or position, having reference to the relative posture the body and head of the child assumes, in regard to the parts of the mother. Thus, for instance, we have presentation of the vertex, but the presenting part may assume, relatively to the parts of the mother, several marked and very different positions.

Baudelocque and his followers recognise and describe no fewer than twenty-seven presentations. Nægelè, on the other hand, has reduced the presentations to five. His views have been generally adopted by modern accoucheurs. "The author, having formed his opinions at the bed-side, where he has carefully noted the causes of delay, difficulty, and danger arising from the various presentations of the fœtus, has arrived at conclusions, perhaps intermediate between the extreme views above presented. He would reject therefore the multiplication of presentations of the trunk and pelvis, but would retain those of the cephalic extremity of the ellipse, being fully persuaded of the great practical importance of a minute acquaintance with the mechanism of labor, in the various presentations of the head, in addition to those of the vertex and face."

The author describes eleven separate presentations; under the head of natural labor he gives two, namely the vertex, and "coccygeal extremities of the fœtal ellipse."

Under the heading of Dystocia, or complicated labor, the result of mal-position, are described nine separate presentations, viz., the top of the head, the base of the skull, the forehead, the face, the chin, the right

or left ear, and right or left shoulder, or side of the trunk. We have always been of opinion that the more simple science can be rendered the better; we cannot see the necessity of multiplying presentations of the superior or vertical extremity of the fœtus. To our mind the three presentations described by Nægelè, as the head, breech, and trunk, are sufficient, after all; the others described by our author are mere varieties, and we think would come better under the heading of position.

In considering presentations of the vertex, the author describes six positions, which are beautifully illustrated by plates, showing in all the different stages of labor, the situation of the child's head relatively to the parts of the mother.

In considering breech presentations under the heading of natural labor, the author gives the following reasons:

"We fully endorse, therefore, the opinion of Baudelocque in opposition to the general teachings of the profession, that pelvic presentations and all their varieties belong to the Eutocia or unaided labors. We deem this arrangement of great practical importance, for it should be impressed upon the mind of the student and young practitioner, that ordinarily the mother is adequate to her own delivery; and that although many attentions may be demanded to *facilitate* the natural modes of delivery, yet that usually any decided *interference* is pernicious. If, however, the labor be termed 'preternatural,' and be ranked under the head of 'Dystocia,' the young practitioner becomes impressed with the idea that the safety of the child, if not of the mother, depends upon his active agency, and is thus induced, too frequently, to interfere with nature's operations."

We cannot agree with the author in the propriety of this arrangement, and we are fully convinced that in all breech presentations, or in whatever way the lower extremities of the child present, that interference, if not necessary at some stage, the accoucheur must be constantly on the alert, ever watchful, ever anxious to afford assistance when necessary.

They are certainly cases as a class calling for energy, promptitude, coolness, and the exercise of much judgment. There is no department of the *arte medica* in which such serious responsibility rests on the practitioner as the conduct of cases of accouchement. We are of opinion that in cases of the above class, as a general rule, if left to nature, that in ninety-nine out of every hundred, it would result fatally to the child; under the most favorable circumstances the vessels of the cord must be stretched and pressed upon, a circumstance which would be rapidly fatal. Again, Valpeau, Tiedemann, and others have stated that the arms will descend before the shoulders engage, provided no traction is

made. This we believe to be an exception and not the rule; certainly it is contrary to our own experience, one of nearly twenty years. Thus, in cases where the arms are retained in utero, it becomes the duty of the accoucheur to aid in their delivery, as they will greatly lessen the cavity through which the head has to pass.

Furthermore, after the passage of the head through the os uteri, the uterus exerts very little, if any, expulsive influence in aid of its delivery. We are far from advocating meddlesome unnecessary interference, nevertheless, would be unwilling to leave the generality of footling or breech presentations to nature unaided.

We should like to analyze the remainder of this excellent work, but already has this review extended beyond our limited space. Chapters twelve to twenty-six inclusive are devoted to the consideration of obstetric operations. In the remainder of the book the subject of Dystocia or complicated labors, is discussed. The author divides the subject into four departments. First; Dystocia from various states of the fœtus, such as large heads, malpresentations, plurality of children, deformities. Secondly; from conditions of the pelvis or uterus, as in deformed pelvis, and displacements of the uterus. Thirdly; in physiological states, as in rigidities, and irregular contractions, puerperal convulsions, rupture of uterus, abortion, and premature labor, uterine hemorrhage, inertia and inversion of the uterus, labor complicated with exhaustion. The fourth division includes all pathological states, such as effusions, thrombus, displacements of the bladder, prolapsus of the vagina, hernia, hemorrhoids, inflammation, tumors, and various diseases acute and chronic. The final chapter is on extra uterine pregnancy. We cannot conclude this notice without referring to the excellent finish of the work. In typography it is not to be excelled; the paper is superior to what is usually afforded by our American cousins, quite equal to the best of English books. The engravings and lithographs are most beautifully executed, but we regret the size of the volume, which to our mind is unwieldy, one to be gloried in by an old Scotch acquaintance, an auctioneer, who used to tell his audience to "feel the wecht of that buck.' The work recommends itself for its originality, and is in every way a most valuable addition to those on the subject of obstetrics.

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We are forced, from the press of matter, to exclude the Notices of several books received. They shall have an early attention.

# PERISCOPIC DEPARTMENT.

## Surgery.

### ON THE TREATMENT OF ACUTE ORCHITIS BY PUNCTURING THE TESTICLE.

By Henry Smith, Esq., F.R.C.S., Assistant-Surgeon to King's College Hospital.

In July, 1863, a young man presented himself amongst the out-patients at King's College Hospital with gonorrhœal orchitis in a very acute form. The pain was unusually severe; and, on examining the organ, it appeared to me that suppuration had taken place, the sense of fluctuation being, as I thought, distinct. With a view of evacuating the pus, I took a bistoury, and made a free and deep incision into the supposed abscess; but, to my astonishment and dismay, not a drop of matter escaped—only a little serum and blood. The tubes, however, of the testicle shot out, as it were, from the wound, forming a protrusion the size of a nut. Some pressure was applied by means of strips of plaster, and the patient was sent away.

Two days afterwards the patient presented himself; but in a very different condition. He was quite free from pain, all the redness and most of the swelling had disappeared, and, on taking off the strapping, it was found that the protrusion of the tubes of the testis no longer existed.

This case, which was somewhat annoying to me at the time, suggested some serious reflections in reference to the speedy relief which had resulted from a practice which in reality was the effect of an error of diagnosis on my part. Was the sudden relief here a mere accident?—or, if not, to what could it be due? The quantity of serum and blood abstracted was so small that the cessation of pain and diminution of swelling could hardly be due to this cause; but it struck me forcibly that the free division of the fibrous tissue enveloping the body of the testis, and the consequent removal of tension from the organ, was the secret of the success, provided it was not a mere accident.

Influenced by this reasoning, and by the result of this case, I determined to try the effect of puncturing the testis in similar cases; and in the next case of acute orchitis which presented, I made a deep and free incision with a sharp narrow bistoury, emitting about half a teaspoonful of serum and several drachms of blood; and no other treatment beyond a little of the common aperient mixture was supplied. The result here was as successful as in the former; and as cases presented themselves, I

adopted the same plan of treatment, reserving it, however, especially to those instances where the swelling and pain were very great. After the trial in a few cases, it was found that the success attending this practice was such as to lead me to adopt it as the usual treatment of acute orchitis; and during the last twelve months I have probably treated in this way upwards of twenty cases, with results such as have astonished both myself and those numerous pupils who have witnessed the practice.

In nearly every case so treated—and I have purposely selected the most acute—the patient has experienced the most striking relief before he has left the out-patients' room; and on the next visit, forty-eight hours afterwards, the contrast presented is so remarkable that the superiority of this plan over the old-fashioned modes of treatment is at once impressed forcibly upon the minds of those even who would naturally be prejudiced against so apparently heroic a treatment. The speedy subsidence of all the acute symptoms is due entirely to the puncture of the swollen and inflamed organ, for I have taken especial care not to prescribe anything else except a little of the common white mixture, or perhaps the use of the ordinary lead lotion, and this chiefly to please the patient.

We all know what a terrible ordeal of violent remedies a patient with acute inflammation of the testicle has to undergo. In the first place, he is obliged to lie in bed for several days; a large number of leeches or the constant application of ice are necessary to relieve the pain; and at the same time the unfortunate wretch is compelled to undergo the process of severe purging and continued nausea, by repeated doses of salts and tartar emetic, before any decided mitigation of his symptoms ensues; and two or three days mostly elapse before he recovers from the depressing influences of these several remedies. Lastly, the unfortunate organ has to be submitted to the tender mercies of a dresser, who, however skilful he may be, cannot help putting the owner of it to severe and prolonged torture whilst he is obeying the injunctions of his superior to "strap testicle."

Now for all this I venture to submit the plan now proposed, and one which I should call a "new" one; but it is venturing on dangerous ground to call anything new now-a-days. Moreover, my old assistant and our present house-surgeon, Mr. Richmond, informs me that when he was in Paris two years ago he saw the same method of treatment adopted there; but I never heard of it before I resorted to it, and the practice in my hands was entirely due to the accident I have related above.

Of course several of my friends and pupils have urged objections against this plan of treatment, and suggested serious results, in the form of suppuration of the organs, impairment of its function, hernia testis,

and fistulous sinuses; but none of these have I witnessed. It is very natural and proper to make these objections, for we have always carefully avoided the possibility of a puncture of the testicle when using a trocar for paracentesis of the tunica vaginalis, and, indeed, I have witnessed violent suppuration of the testis speedily ensue from this accident; but it must be borne in mind that wounding of a healthy testicle with a large and blunt instrument like a trocar is a totally different thing from a careful incision made into the highly inflamed organ by a thin sharp blade.

The only inconvenient result I have witnessed from this treatment was the following:—An incision was made into the testicle of a middle-aged man, with the usual relief, but in a few days the scrotum began to swell, great pain was experienced, and the man was taken into the hospital. The objectors to the mode of treatment suggested all sorts of disasters, in the shape of suppuration of the testicle, &c., but on careful examination it was ascertained that the swelling consisted of a large and rapid effusion of fluid into the tunica vaginalis, which was at once evacuated, with speedy relief to the patient. In another instance I made the incision much deeper than was necessary, carrying the point of the knife nearly to the back of the organ. As much as ten ounces of blood were lost, but the testis was violently inflamed and swollen, and the only effect of the accident was to make the patient somewhat faint, but at the same time to give more speedy and effectual relief than usual.

This circumstance may lead one to the belief that the relief is due solely to the escape of blood from the puncture; but this view is inconsistent with the fact that great relief is given when only a few drachms of blood, mixed with serum, are discharged. Doubtless the direct withdrawal of blood from the highly inflamed testicle is of service, but my own view of the matter is, that the relief is in a great measure due to the withdrawal of the tension from the body of the testis by free division of the tunica albuginea.

Whatever may be the precise manner in which the good results are produced, there is no doubt of the fact, and I would earnestly suggest to surgeons, especially to my colleagues, the assistant-surgeons of the hospitals, who treat the majority of cases of orchitis, to adopt the plan proposed, rather than be submitting their patients in a routine way to all the horrors of the middle passage, from tartar emetic to strapping of the testis.

Caroline-street, Bedford-square, 1864.

P. S.—Since the above was written I have seen one of my old pupils who has been spending the last six months in the Paris hospitals, and he

informs me that the ordinary practice at the Hôpital de Midi in cases of acute orchitis is to make a puncture in several places with a lancet; the instrument is not carried into the body of the testicle, but simply through the tunica albuginea. He describes the plan of treatment as most successful.—*Lancet.*

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## LIGATURE OF THE COMMON ILIAC ARTERY.

Professor Brainard reports the following case in which he performed this operation:—April 9, 1863, called to visit Col. Scott, 19th Illinois Volunteers, who was wounded at the battle of Stone River. A musket-ball had passed from before backwards through the thigh, entering below the pelvis at the outside of the femoral artery, grazing the inside of the femur, and coming out of the buttock. At the time of the accident, there was hemorrhage, which was controlled, as was supposed, by pressure on the femoral artery. The compression was continued about three weeks, during which time no hemorrhage occurred. The wound suppurated, and some small scales of bone came out at each orifice of the wound. He was removed to his home in Chicago, and did well, although the wound remained open behind, until about the fifth of April, three weeks after the accident, when a small tumor formed in front, which was opened. A day or two after, a hemorrhage took place from both openings. It was on account of this that my advice was asked. On the night of the 9th, at eleven o'clock, a copious hemorrhage renewed, which was controlled in a measure, but continued at intervals during the night. 10th: Saw him at ten, and applied the compressor over the femoral artery. This seemed to arrest the bleeding, but in about two hours it returned.

The bleeding had been so great as to threaten death, and I determined to tie the external iliac artery, not doubting from the history of the case that the hemorrhage was from branches of the profunda femoris close to its origin. With the aid of Professor Freer and Dr. Hurlburt, the ligature was placed upon the external iliac artery in the usual manner, as that described by Lisfranc; but on changing the position of the patient to remove the soiled bedclothing, the bleeding renewed as freely as ever. On a re-examination, the ligature was found to control the external iliac, and it was evident that the ischiatic artery was the one giving blood. The danger was urgent, and I enlarged the wound upward and outward, and placed a ligature on the common iliac artery. The anterior wound in the thigh was then enlarged, and a great quantity of coagula removed from it by the finger. No bleeding; patient under chloroform

during the operation. Warm applications to the member; brandy and broth ordered. 11th, a.m.: Limb cool, but not cold; has been troubled with nausea and attempts to vomit, which gave pain in the wound; pulse 100, condition good. Ordered an enema and a solution of soda bicarb., with gum Arabic for the vomiting. Broth continued. 12th: Has considerable pain and tenderness in the region of the left kidney. Pulse 120; slept well during the night, with two doses of acetum opii; wounds commencing to suppurate. 13th: Pulse 100; tenderness in left side diminished; takes broth with wine; slept well. 20th: Cut of operation suppurates freely. Allowed beef broth and wine, with opiate at night. 24th: Ligature on the external iliac artery came away.

May 1st: Ligature on common iliac came away. Patient doing well. 12th: Wound from operation healed. From this time he remained in good health until the early part of July, although the wound continued to suppurate, and some small pieces of bone were discharged at the posterior orifice. At this time he was attacked by a copious watery diarrhœa, followed by typhoid fever, of which he died July 8th, three months after the operation.—*Chicago Med. Journal.*

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## TRAUMATIC TETANUS.—RECOVERY.

By P. Gordon Stewart, M.D.

On the 30th of October, a negro, aged thirty, of temperate habits, whilst engaged in feeding a crushing machine in a tannery, sustained a compound comminuted fracture of the second and third phalanges of the right index finger. The hope of saving the member was slight, but believing that, under favorable circumstances, a finger of some utility—better than none—might be retained, it was put up in the usual manner with water-dressing. Everything progressed satisfactorily, and on the 17th of November the wounds had nearly cicatrized. On the 18th I was requested to see him on account of "some stiffness about the jaws," and his swallowing with difficulty. He was evidently suffering from tetanus. The muscles of the neck and back, and of the anterior of the chest and abdomen, were hard and rigid, and had been so, it was reported, for the last twelve hours. He referred his sufferings chiefly to pain over the precordia and his inability to swallow. The symptoms increased in severity; but it is unnecessary to follow the case in all its details; and on the 21st the haggard expression of face, faltering pulse, and profuse cold, clammy sweat, seemed to show that "there was but one way." In the evening, however, the skin and pulse showed reaction, although the spasms were still persistent, and matters were nearly *in*

*statû quo* on the 22nd. He was seen, at my request, on the 23rd, by Drs. Ebden and Borchards, and notwithstanding there being in many respects a marked improvement, relying upon our former experience, they agreed with me in thinking the man must die; and Dr. Ebden, be it observed, from his long residence, in connection with the public service in India, where tetanus is of such common occurrence amongst the colored population, was familiar with the disease in all its phases. From this date up till the 30th the patient's sufferings gradually diminished, the power of deglutition returned, and he ultimately completely recovered, and is now engaged in his former occupation.

The treatment consisted in the free use of chloroform, occasional doses of croton oil, calomel, and compound jalap powder. The course of the spine throughout was vesicated by plaster, and dressed with the strong mercury ointment. Calomel and opium and tincture of cannabis were given in full and repeated doses.

Much was at one time expected from Indian hemp, but, so far as this case is concerned, mercury, and above all, opium (the time-honored sheet anchor of medical practice), appeared to be the medicines on which reliance could be put; but whether the cure was dependent on these may well admit of doubt, for it is quite possible, as similar treatment has so often failed, that the poor fellow may have triumphed over the malady and additional obstacles that science threw in his way.

Ferguson says of this dire disease, "almost every expedient, every medicinal resource, that ingenuity or skill could devise, has been tried in vain." While Skey, in his work on Surgery, shows how little he expected from medical treatment by relating a case where he kept the patient for many hours under the influence of chloroform, and determined on keeping him so *until he died*, had not the anæsthetic ceased even to afford temporary relief; "for better," he adds (but I quote from memory), "to die from chloroform than from tetanus."

A case of recovery, then, from traumatic tetanus cannot be without interest, and the publicity which THE LANCET will afford it, may not be without its use.

Cape of Good Hope, Rondebosch, March, 1864.

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## LIGATURE OF THE ARTERIA INNOMINATA.

It is now very close upon half a century since Dr. Mott of New York first performed the operation of applying a ligature to the arteria innominata. His patient recovered sufficiently to be able to move about; but owing to successive hemorrhages, died on the twenty-sixth day. The Amer-

ican Medical Times states that it has been performed thirteen times with an invariably fatal issue; but that, notwithstanding this constant succession of failures, Dr. Mott did not despair of ultimate success for the operation; that he has not been mistaken, is fully shewn by a correspondence published in our cotemporary's issue for August 20th. In the case mentioned, it will be observed that hemorrhage recurred several times between the 29th May and 9th July, on which latter day the vertebral artery was secured. We would draw attention to the following letter of Dr. Rogers, giving the details of the case.—EDS.

NEW ORLEANS, July 31, 1864.

SIR,—To you, the originator of the operation for ligating the arteria innominata, is due the first notice of its success.

Permit me to offer you my sincere congratulations, that after so many failures, you have been spared to enjoy a triumph in verifying the noblest conception in operative surgery.

I beg to offer a brief history of the case, as presented on the 9th of May last, in the Charity Hospital of this city. I received an invitation from Dr. A. W. Smith, the able surgeon of that institution, to witness the ligation of the subclavian artery upon the distal side of an aneurismal sac. The subject was a mulatto man of 33 years of age. The tumor was large, with a strong pulsation. Being satisfied, for reasons which it is not necessary to mention, that the operation proposed would certainly fail, I urged upon Dr. Smith, and those present, that the prospect of success would be much greater by applying the ligature to the arteria innominata and the carotid artery at the same time, as proposed by me in 1849. (See Surgical Essays, page 45.) After some discussion, it was concluded to postpone the operation for some days.

On the 15th, Dr. Smith informed me, that he had concluded to perform the operation as proposed by me. In the presence of several civil and military surgeons he performed the operation agreeably to your direction, and applied a ligature to the arteria innominata and to the right carotid about one inch above its origin. The wound was dressed in the usual manner, and the man removed to bed.

May 28th. The ligature came from the carotid artery.

May 29th. Hemorrhage from the wound, but arrested by slight pressure.

30th and 31st. The hemorrhage returned.

June 1st. The hemorrhage returning. Dr. Smith removed the lint, and filled the wound with small shot.

June 2nd. Ligature separated from the arteria innominata.

June 17th. A part of the shot removed from the wound, followed in a few days by hemorrhage. The shot returned.

July 5th and 8th. Hemorrhage returned.

Believing the hemorrhage must be supplied by the vertebral artery, through the subclavian, it was determined to ligate the artery; and accordingly, Dr. Smith secured the vertebral artery on the 9th of July.

July 19th. No return of hemorrhage. The ligature separated from the vertebral artery this day. A doubtful pulsation may be felt in the right radial artery. The aneurismal tumor has disappeared.

July 30th. General health much improved since the last report. The wound is nearly closed. He walks about the ward, and is desirous of returning to his home. We have every reason to believe that the operation is in every respect a success.

With great respect, your humble servant,

D. L. ROGERS.

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## THE INSTANTANEOUS TREATMENT OF ITCH BY OIL OF BERGAMOT.

[Translated from the Journal de Médecine de Bordeaux for June, 1864.]

DR. MANFRÉ, the venerable clinical professor in the University of Naples, has published, in a Roman political newspaper, many articles on the rapid cure of itch. The best remedy, which he says he has thus far tried with complete success in his clinical service, is, according to M. Manfré, the oil of bergamot, which cures *instantly*, or at most in *two minutes*, even where the eruption is general.

According to him, this remedy, more economical, less irritating, more prompt in its insecticide effects than Helmerich's ointment or sulphur, makes the wards appropriated for patients with this disease in hospitals superfluous; for a single friction over the whole affected surface is sufficient to effect a perfect cure. The patient may return home immediately after this application, the precaution being taken of making him change his clothing, or of thoroughly purifying that which he has worn. An ounce or two of oil of bergamot is enough to complete the cure.

According to M. Manfré, the same remedy may be advantageously substituted for all those employed for the destruction of the *pediculus pubis*.

For a long time physicians have known the insecticide power of the essential oils, and there may be found in some formularies many receipts of M. Aubé for the cure of itch in two minutes. The essential oil of turpentine, mixed with essence of lemon, is the basis of the treatment recommended by this author. Before him, M. Gras had recommended the

essential oil of lavender, which is quite analogous to that of bergamot, and has the additional advantage of not costing more than a quarter or half as much.—*Boston Medical and Surgical Journal.*

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## ON THE TREATMENT OF ITCH.

*To the Editor of the Dublin Medical Press.*

DEAR SIR,—Having seen something in your paper lately on the subject of itch, I beg to send you a copy of a prescription for psora furnished some few years ago by the Director-General of the Army Medical Department to regimental surgeons: and I may add that I have used the application for a length of time past with the very best results. Certainly it is more efficient and more cleanly than the mode of treatment previously in use in regimental hospitals. Another great advantage is the rapidity with which the disease is removed; half an hour, in almost every case, is sufficient to complete the cure.—Yours truly,

A REGIMENTAL SURGEON.

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(EXTRACT.)

"The remedy is prepared by boiling one part of quick lime, with two parts of sublimed sulphur, in ten parts of water, until the two former are perfectly united. During the boiling it must be constantly stirred with a piece of wood, and when the sulphur and lime have combined, the fluid is to be decanted and kept in a well-stopped bottle. A pint of the liquid is sufficient for the cure of several cases. It is sufficient to wash the body well with warm water, and then to rub the liquid into the skin for half an hour; as the fluid evaporates, a layer of sulphur is left upon the skin. During the half hour the acarus is killed, and the patient is cured. It is only needful then to wash the body well, and to use clean clothes. In Belgium the treatment is introduced by first rubing the body for half an hour with black soap; but this does not appear to be necessary—the only essential act is that of the careful application of the fluid sulphur."

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# Medicine.

## ON ALBUMENURIC APHONIA.

BY GEORGE D. GIBB, M.D., Assistant Physician to the Westminster Hospital.

*Albumenuria* is a manifestation of the renal disease now known as Bright's, and gives rise occasionally, though rarely, to laryngeal symp-

toms which result in aphonia, to which Dr. Charles Fauvel, of Paris, has recently given the name of "aphonia albuminurique." This loss of voice occurs also in the renal dropsy following scarlatina. It must be in the experience of most hospital physicians to have witnessed cases of extensive anasarca resulting from Bright's disease, and as a sequel to scarlet fever, involving the submucous areolar tissue of the larynx, and producing hoarseness, stridor, and aphonia. Although this cannot be an extremely rare complication, for several examples have come under my own notice in the larger wards of the hospitals of London, yet scarcely a writer that I am acquainted with ever mentions such an occurrence.

It was but the other day that a male child, two years and a half old, was brought to me amongst the out-patients at Westminster Hospital with Bright's disease of recent date, associated with general dropsy. The child had been much exposed to cold, was blanched, puffy about the eyelids, had bled at the mouth, and the voice was completely gone. The urine was scanty and albuminous, which was from the disease mentioned. With assistance I was enabled to see in the laryngeal mirror supra-glottic œdema of the larynx, of a very pale, indeed almost white color. Here was an instance of albuminuric aphonia in a young child. The laryngeal dropsy was purely passive, yet the dyspnœa was urgent.

It is well known that one of the causes of death in dropsy is effusion beneath the mucuous membrane of the air passages, and the larynx is liable to become involved, and add much to the patient's suffering. I am indebted to Dr. Charles Fauvel for a copy of his original essay on albumenuria, and the following is a summary of his observations:

The laryngeal mirror only can discover the affection, which is a white œdema, either chronic or intermittent, of the vestibule of the larynx and vocal cords, preceding or following albumenuria, and more often without any external manifestation to afford even the suspicion of the existence of Bright's disease. This œdema at one time abruptly manifests its presence, and at another slowly, by complete aphonia, or slight dysphonia. The first symptom which appears is hoarseness; the patient neither coughs nor expectorates; has no feeling of a foreign body; he complains only of slight uneasiness of breathing, and a little oppression at the chest. Very soon he is compelled to make great efforts at inspiration, and after some days the voice is weak and obscure, sometimes altogether lost, and a whisper occurs only with the lips.

No cause can be made out in the patient's history to explain the condition of the larynx. If, however, it is recognized either by a direct examination of the larynx, or by the appearance of an œdematous swelling of the face, or swelling of the eyelids, or general anasarca, the proper

treatment for albumenuria will arrest the progress of the laryngeal affection. If the disease be not diagnosed, it will nevertheless disappear in a few days, because it will have been the consequence of an intermittent albumenuria. On the other hand, when the intermission disappears, and the disease returns in an aggravated form, the obstruction becomes so great that tracheotomy must be performed. Dr. Fauvel cites the particulars of two or three well marked examples, and has seen many patients attacked with aphonia or dysphonia in the best of health, without any other explanation to account for the swelling in the larynx than albumenuria, very sensible traces of albumen being discovered in the urine by the application of nitric acid.

If supra-glottic œdema of the larynx suddenly arise as a forerunner or primary symptom of Bright's disease, its early diagnosis is of great importance, and the profession cannot be too soon made aware of it.—*Lancet.*

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## ON THE USE OF TEA AS A REMEDY IN COMA.

By James A. Sewell, M.D., L.R.C.S.E., Senior Physician to the Hôtel Dieu Hospital, and Professor of the Practice of Physic at Laval University, Quebec.

Mrs. A. B——, aged 30, has been subject for some years to what she calls "spasms of the heart," for which she, some short time ago, visited Europe, and was treated at different times by Drs. Simpson of Edinburgh, Stokes of Dublin, Trousseau of Paris, and other eminent men in London, Vienna, and Glasgow, but without any effect. Latterly she had been using Battley's sedative solution with more benefit, but as she had no attack for some months, she had discontinued the use of this remedy for about three months. A short time since she was threatened with one of her usual paroxysms, and dreading it very much, she had recourse at once to Battley's sedative solution in two-drachm doses; these doses she continued at intervals till she had taken two ounces and a half in about eight hours. Shortly after the last dose she was seized with a slight convulsion, and almost immediately became comatose. I saw her at two o'clock a.m., two hours after the convulsion, and found her in a state of profound coma; pupils contracted; respirations two in the minute, and performed with a great effort; pulse very rapid, small, and extremely irregular; face deathly pale, ghastly, cold, and covered with a clammy sweat; extremities also cold. It was evident that she was under the narcotic influence of the enormous dose of opium which she had swallowed, and that death was imminent. As three hours had elapsed since

she had taken the last dose, I conceived it useless to use the stomach pump; moreover, in the then state of her respiration, I believe the use of that instrument would have been at the risk of her life. As she could not swallow, an emetic was equally out of the question. I therefore applied extensive sinapisms to the legs and chest, used the cold douche, and applied ice to the head. Having by this time been joined by my friend, Dr. Jackson, I suggested the propriety (while waiting for a galvanic battery) of administering an injection of a pint of the strongest possible infusion of green tea per anum, which was done at a quarter past three a.m. In half an hour there was a visible improvement in the breathing, which was now six in the minute, accompanied by a slight return of color to the face, and a corresponding improvement in the temperature of the cheeks. The coma continued much the same, but encouraged by the improvement in the other symptoms, the injection of tea, to which some brandy was added, was repeated at four o'clock. During the next hour we had the satisfaction of observing a gradual return of the respiration to its normal condition, with an improved state of the pupils, and a corresponding change in the general temperature of the body. She continued to progress favorably, and between five and six o'clock (or about two hours and a half after the first injection), though she could see nothing, she recognized those about her by their voices, and soon after we were enabled to pronounce her out of danger.

This case I consider of great interest taken in connexion with the use of "green tea" as an expergefacient or nervous stimulant. The improvement in the general symptoms followed so rapidly upon the treatment, notwithstanding the enormous narcotic dose taken, that I think I am justified in attributing this lady's recovery to the adoption of the tea. I am aware that neither this remedy nor its application is new, as I believe a case very similar to the above was published in the *Lancet* some two years since, which was successfully treated with "theine;" but while every practitioner has not the active principle by him, the tea itself is accessible to all. I may state that this is the fourth time I have used green tea in cases of coma, and with the best results. My first case occurred about six years ago.

An infant, aged eighteen months, had been forced by its drunken father to swallow three parts of a wineglassful of the vilest whiskey usually sold in the low taverns which infest this city. She shortly afterwards became comatose, in which state I found her in an hour and a half after taking the poison. Her face was pinched and drawn; her extremities very cold; her pupils dilated, and death apparently at hand. With very great difficulty I succeeded in getting into the stomach one teaspoonful of a

strong infusion of tea. This I ordered to be repeated every twenty minutes. On my return I was informed by the mother that after the sixth dose the child had perfectly recovered, and was, as she expressed herself, "as brisk as a bee." My second case was a peculiar and instructive one, as it shows what a powerful agent the remedy under consideration really is.

Mr. S——, aged 40, was suddenly seized with violent convulsions which left him profoundly comatose. In my absence he was seen by one of my medical friends, who considered him dying. On my return home, some three hours afterwards, I visited my patient, and finding him still perfectly insensible, notwithstanding the adoption of the ordinary remedies, I ordered a strong infusion of the tea to be prepared, and directed that he should get one tablespoonful every twenty minutes till my return. This was effected with the greatest difficulty. I saw him again in two hours, when he had taken six doses, and I found him sufficiently recovered to be able to recognize me on my entrance. Finding him so far improved, and not yet fully acquainted with the power of the remedy, I committed a great mistake by making a rule of three case of the matter, reasoning, that if six tablespoonfuls had done so much in two hours, what would twelve doses do in four! I therefore ordered the above-mentioned dose to be continued as before. I returned in about one hour and a half, after my patient had taken four additional doses. On entering the room I found my man (who a few hours before had been pronounced to be dying from coma) a raving maniac. He had destroyed all the delf in the chamber, maltreated the nurse, and struck his wife, of whom he was very fond, and whom hitherto he had always treated kindly. These symptoms of nervous excitement, brought on by an over-dose of the expergefacient, soon passed off, and next day he was himself again.

My third case was that of a young lady, aged 26. One morning, not coming down to breakfast, she was sought for, and found in her bed in a state of profound coma. She was treated for two days by the late Dr. Morin and myself by cupping, croton-oil, sinapisms, &c., but with no change in the symptoms. At this time, although the case was not a promising one, I suggested the tea remedy, which was followed in about three hours by a complete recovery of consciousness.

We are, I believe, indebted chiefly to the late Dr. Graves for the introduction of tea as a nervous stimulant, who recommends its use in the coma of fever, and it is from him I have borrowed its application in the above cases. My experience in the remedy is, as may be seen, not very great; but, so far as it goes, it has been highly satisfactory to myself, and will, I believe, prove equally so to all who will give it a fair trial.—*Lancet.*

# Midwifery.

## CASE OF PARTIAL RUPTURE OE THE UTERUS.

By J. H. Park, M.D.

On the 4th of July, 1863, I was called in to Mrs. B., in labor with her first child, the midwife being in attendance, but the friends getting impatient. On examination, I found the head presenting—first position; the os about the size of a florin; pains moderate and continuous. The woman was young and strong, but most impatient; and the midwife directed my attention to the peculiar shape of the abdomen, which was greatly protuberant superiorly—in fact, reversing the shape of the abdomen usually found in labor. With the assistance of moderate dilation with the finger, the os fully opened and the head descended, and then remained impacted for an hour at the floor of the pelvis, notwithstanding continuance of the pains. I then applied the forceps, and, having got the head born, succeeded, with great difficulty, in extracting the rest of the body, the uterus apparently giving little or no aid. The abdomen still preserved its original strange appearance, and, on introducing the hand, the whole of the placenta was found firmly adherent to the fundus, the condition being probably caused by several kicks on the abdomen, which (I then learned) the poor woman had received during her pregnancy.

For upwards of an hour my efforts to separate the placental mass were unavaling, not a single portion of it being detached. As my hand was getting quite cramped, I called in the assistance of another practitioner, before whose arrival, however, I succeeded in getting it away.

There was not much flooding, but the woman was considerably exhausted. On again introducing my hand to get the womb to contract properly (there being hour-glass contraction), I was mortified to find what I considered still a piece of placenta hanging from the lower and back part of the uterus. I passed my fingers round it, but used no force, as at its upper part it was continuous with uterine substance. We both were at a loss to account for it, and thought it prudent to call in the assistance of a practitioner of much greater experience than either of us. The placenta was carefully examined, and, though torn, was found to resemble the entire mass. We then each examined the uterus, and succeeded in satisfying ourselves that what we felt hanging down was in reality a portion of the mucous and the muscular walls itself. The tear was from below upwards, and of a semi-circular shape, and must have involved one-half of the thickness of the posterior wall. It felt very like the placenta,

without the lobulated feel of the latter. There can be little doubt that, in the weakened state of the uterus, arising from the inflammation required to produce such extensive placental adhesion, the tear was the result of the violent contraction of the organ itself. Had the direction of the rent been reversed, it would have been a question whether I had not produced it by my efforts at abstraction. The woman was so much exhausted and depressed that a fatal issue was looked for; but, by a liberal use of stimulants and opium, she made an excellent recovery.

The result was not only gratifying to her medical attendants, but must have afforded considerable satisfaction to the husband.

Broughty Ferry. —*London Medical Circular.*

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## CASE OF OVARIAN DISEASE IN WHICH OVARIOTOMY WAS NOT PERFORMED.

By B. J. Boulton, M.D., L.R.C.S.Ed., Surgeon to the Horncastle Dispensary.

Forty years ago, when a student in Edinburgh, dissecting and learning anatomy under that admirable teacher and excellent surgeon, John Lizars, I was present at his five famous operations of ovariotomy, which, with his characteristic truthfulness, he published, with plates. In those operations the room was heated to 98°. Hot water and flannels were provided to envelope the protruding intestines, for the abdomen was laid open from ensiform cartilage to pubes, or as Lizars, in nautical phrase (he had been assistant-surgeon in the navy), expressed it, "from stem to stern." I was one, amongst other pupils, who took my turn in night and day attendance upon the patients, of each of whom I have a vivid recollection,—of the woman deeply marked with small-pox, in whom the tumor had adhesions so extensive and vascular that no attempt was made to remove it, but who recovered; and also of the fat, pale, flabby young woman, with large omental lobules of fat, who died; and never have I forgotten the dismay depicted in the countenances of those who had diagnosed the case when the operator, with a coolness, which was never disturbed during an operation, looked up, and quietly said, "There is no tumor, gentlemen." This woman died soon after from shock and exhaustion. It was the rule then, as with Professor Simpson now, to support the patients after operation with large repeated doses of opium. Unfortunately in this case it was not known until afterwards that the woman was an opium eater.

There can be no doubt that the results of those cases, in the hands of one of the most bold, skilful, and enterprising operators of the day, and published so faithfully, settled the question of ovariotomy in the minds

of British surgeons of that time, and induced Liston, who had unbounded confidence in Lizars as a surgeon and anatomist, to hurl the epithet, so rich in his own expletives (an epithet quoted so *aplomb* by Dr. R. Lee at the Medical and Chirugical Society), at the heads of those who had the hardihood and the courage to revive the operation.

But with chloroform and all the appliances of modern Surgery, with a method of diagnosis rendered all but perfect, and with the modifications introduced into the operation itself, the question of ovariotomy assumes a very different aspect. In recent discussions upon ovariotomy at our medical societies and in the journals, it appears to me that the condition of patients upon whom the operation is not performed has been almost lost sight of. ' Those who object to ovariotomy speak as if the disease, which is scarcely ever curable except by removal, is not so dangerous to life or so full of suffering as to justify a hazardous operation. Is this not a most incorrect assumption ? In reply, I say that in the course of a long practice I have witnessed the miserable end of about twenty ovarian patients, and venture to bring the following case before the profession, believing it to be by no means an uncommon example of the course of ovarian disease when treated by palliative measures alone. Who that has watched such a case has not noted the steadily progressing decay of his patient: physical suffering and exhaustion dragging her slowly, but certainly, down into death's dark valley, without a ray of that hope which in some other diseases cheers life's last months with promises, delusive perhaps, but none the less welcome ?

Miss W. had been a delicate child, with highly gifted mental powers. When young she had been confined to her bed for twelve months for some spinal weakness. These symptoms gradually disappeared, and for about seventeen years she enjoyed health, which if not robust was at least tolerably satisfactory. During this period she menstruated regularly, but painfully. Several years ago she received a severe shock from the breaking off of a marriage engagement which had existed for several years. At first the symptoms pointed to general derangement of health rather than to any particular disease. Soon the catamenia became unequal and somewhat scanty, and very shortly afterwards a hard lump the size of an orange was discovered in the iliac region. This lump, which was tender on pressure, gradually increased in size, and began to press injuriously on surrounding organs. The bladder became irritable, bowels obstinately constipated, while pain and sleeplessness were so distressing that opiates were freely given, any good derived from them being more than counterbalanced by the dyspeptic and nervous symp-

toms induced. Œdema made its appearance, and the patient, unable to walk, was confined to her room.

This was the state of thiugs when the case fell into my hands in January, 1862. In July I tapped one of the cysts, and drew off six pints of thick, dark colored fluid, giving very partial and transient relief. The operation was repeated in November and December of that year, a more thorough emptying being obtained by thrusting a long curved trocar through the septum into a second large cyst. From the first I feared the case was not one suited for an attempt at radical cure; but to make sure on this point, Mr. Spencer Wells came down in consultation.

The girth now at the umbilical level was forty-five inches; distance from ensiform cartilage to pubic syphisis, eighteen inches; from either anterior inferior spine of ilium to umbilicus, thirteen and a-half inches. The general outline of the tumor showed that it was made up of three principal cysts. The liver was pressed backwards and to the right, and a coil of small intestines had been pushed up in front of it. Fluctuation was distinct in each of the large cysts. No crepitus, but considerable pain was felt on pressure over the right side, and also under the left false rib. The uterus was high up, out of reach. Vagina elongated into a funnel-shaped cylinder, and in the recto-vaginal fossa, projecting into both rectal and vaginal spaces, was a large tense tumor, evidently containing fluid, but perfectly immovable. The abdominal integuments were thin; not œdematous, but traversed by large superficial dilated veins.

The abdominal skin was quite immovable from the surface of the tumor. Mr. Wells was of opinion that the case was one in which, owing to the extent of adhesions within the pelvis and to the abdominal walls, ovariotomy could not be performed with any reasonable probability of the patient surviving the operation. He advised the next tapping to be made per rectum. I made the puncture on May 19, and drew off ten pints of viscid, dark-brown fluid. The three cysts evidently now communicated with each other. The tumor, however, remained as high in the abdomen after the operation as before, and the position of the pelvic portion remained unaltered. The operation was repeated through the abdominal wall on June 16.

I may add that Mr. Wells saw the patient at a subsequent period. He still held, against the anxious importunities of relatives, to his former opinion, that any attempt at radical cure was out of the question, and the condition of the parts displayed at the post-mortem proved the correctness and wisdom of that decision.

It is needless to follow the case minutely from week to week. It is sufficient to say that tapping was had recourse to whenever the distension of the sac, causing terrible distress, rendered it necessary. This, during great part of 1863, was once a fortnight, and the fluid accumulated at the rate of a pint per day. As this went on, the general health became more and more impaired. There was constant vesical irritation. Œdema extended from the left leg to its fellow; then to the abdomen and back. Anything approaching to rest was only obtained by chlorodyne. Bed became intolerable. For weeks this poor sufferer passed night and day on the sofa. Emaciation proceeded to the last degree; the respiration was much disturbed with frequent fits of dyspnœa and frantic struggles against suffocation. There was horrible pain sometimes referred to the stomach, heart, or limbs during the last few weeks. She complained constantly of blindness; it seemed to be more of perversion than loss of vision. Persons or large objects near her were always supposed to be on the opposite side, whilst smaller objects (a crumb or a pin) she would pick carefully from the bedclothes. A mind rich in natural gifts and stored with acquired knowledge gave way; a memory of wondrous power became confused; bodily distress, pain, extorted from a weakened brain only the expression of wailing agony and a cry for release, which was answered (quickly at last) on June 16, 1864, the age being 46.

The post-mortem examination at once showed the tumor to be a multilocular cyst of the left ovary, extending upwards to the ensiform cartilage. Its principal cavity, which showed traces of earlier division into several compartments, contained fourteen pints of the usual thick brown fluid. Over the surface of the tumor were, here and there, attached thin walled lobular cysts, the size of a kidney, and filled with clear limpid fluid. The proper covering of the large cyst was for the most part thin from distension; but the whole of its anterior surface was firmly adherent to the peritoneum. In some places, especially in the right iliac region, these adhesions were an inch thick, and so firm that it was with difficulty they could be separated even with the scalpel. The pelvic adhesions were also so strong that force, almost amounting to violence, was required to dislodge the tumor from the cavity. The uterus was almost entirely absorbed; the right ovary appeared healthy; the bladder and rectum congested; liver and other organs tolerably normal.

For the curious in such matters, here are the dates of tapping:—

1862.—July 16, November 6, December 8.

1863.—January 30, March 30, May 6, 19, June 16, July 14, August 3, 17, 30, September 14, 30, October 14, 30, November 13, 27, December 14, 30.

1864.—January 11, February 11, March 30, April 25, May 23. Twenty-one times on the right of the mesian line; three times on the left; once by the rectum; the quantity of fluid varying from ten to sixteen pints.

This sad picture is not overdrawn. Women have always been ready to undergo the risk of ovariotomy—a proof of their conviction of the gravity of the disease. They know now pretty generally that there is a resource for them, and they are clamorous to be relieved. That alone will not sway or mislead the judgment of a conscientious surgeon. Yet the question does press, What is to be done with ovarian disease? Is every case to be left to its certain fate?

Let any man of long experience in female diseases recall his ten, fifteen, or twenty cases of ovarian dropsy, each with its ten, twenty, or thirty tappings. Can he be satisfied with this wretched temporising process? With death most surely in the distance. In one case I tapped thirty-two times. It is my firm belief that the cyst was uniocular, without adhesions or complications, and that at the present day it would have been considered easy of removal. The patient died of marasmus and exhaustion. I cannot at this moment recollect a single ovarian patient dying of any other ailment. What are the risks of ovariotomy? Incorrect or uncertain diagnosis? Peritoneal inflammation? Is the diagnosis of a tumor in the belly so much more difficult than of a large tumor of the neck, with its deep attachments and belongings? What surgeon of any eminence would be deterred from the most tremendous operation for the removal of a tumor of the jaw, neck, or axilla, in the vicinity of large nerves and vessels, for fear of after consequences? Even large cancerous masses are often removed with the hope of prolonging life, although the disease is certain of return. But the ovarian operation of my early days is shorn of its horrors. Last May twelvemonth I saw an ovarian tumor skilfully removed by Mr. Spencer Wells at the Samaritan, from a girl of 19, who perfectly recovered; and Mr. Wells showed me at the same time a still younger girl, perfectly well, from whom he had removed one ovary. A woman of 60, in whose case there had been extensive adhesions to deal with, joyously recovering; and a poor emaciated creature with diseased lungs, nearly heart-broken, when told she must go out with what relief tapping could afford her. Surely no reasonable man will be content henceforward to leave every case of ovarian disease to its fate. The disease itself will attract more attention; will come earlier under medical inspection; we shall have more correctness of diagnosis; greater care and discrimination in the selection of cases; we have chloroform to prevent shock and pain; a more limited incision; no exposure

of intestines or other organs; little or no risk of fluid escaping into the abdomen; and the wound healing like a cut finger, hundreds of lives ought to be preserved.

If the resection of a deformed or diseased joint with shortening of the limb be held to redound to the honor of modern surgery, much higher distinction awaits those zealous attempts, now being so successfully made, to render safe the removal of a horrid incubus peculiar to the best part of creation—an incubus occurring at any age from 16 to 60, not in itself malignant, but which by its four or fourteen years of protracted suffering, saps the foundations of the vital powers, unfits a woman for all the active and social duties of life, deprives her of every solace and enjoyment, and which in the end most certainly kills.—*Medical Times and Gazette.*

## Materia Medica and Chemistry.

### ON THE THERAPEUTICAL APPLICATIONS OF THE SOLUTION OF PERMANGANATE OF POTASH AND OF OZONE.

Dr. Jackson, of the University of Pennsylvania, having ascertained that the disinfecting and deodorizing properties of the solution of permanganate of potash had been established, determined to test its therapeutical action and practical application. He found, by experiments on himself, that the solution had no proper taste, but gave a sensation of coolness in the mouth, leaving behind a slight styptic feeling and dryness which continued for an hour or more. When taken in the dose of a teaspoonful, slightly diluted, two or three times a day, it caused no inconvenience, but it was somewhat diuretic, and increased the appetite. He prescribed the solution in a case of dyspepsia, attended with loss of appetite, disordered digestion, and extreme lassitude. The patient was directed to take a teaspoonful in half a wineglassful of water four times a day, and in a few days he was quite well. Four cases of a similar character were treated in the same manner, with a rapid and successful result. Dr. Jackson relates other cases in which the solution of the permanganate was equally beneficial, one being a case of abnormally large secretion of urine. But the most remarkable and almost marvellous effects of this salt are observed in the treatment of gangrenous wounds, and for this purpose it has been employed in several of the hospitals of the United States. Having thus proved the decided therapeutic action possessed by this substance, Dr. Jackson endeavored to ascertain its active principles, and with this view he tested it for ozone, which he

found in great abundance. He regards the solution of permanganate of potash as containing, besides the salt itself, ozone (which is an allotropic form of oxygen) and the peroxide of hydrogen, which may be regarded as water in combination with *antozone*, another allotropic form of oxygen. These bodies possess the power of arresting the process of disorganization in living tissues, and arousing the vital action in decaying structures.—*The American Journal of the Medical Sciences.*

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## ON THE ACTION OF BROMIDE OF POTASSIUM IN INDUCING SLEEP.

By Samuel R. Percy, M.D.

An article on this subject appeared in the *London Lancet* for May 28, by Dr. R. Behrend, in which cases are given showing the sedative effects of this remedy when given in large doses. Dr. Behrend was induced to use this remedy by the recommendation of Dr. Brown-Séquard. Garrod, in his Lectures on the New British Pharmacopœia, also mentions that bromide of potassium, in large doses, induces drowsiness.

I have had several opportunities to try this medicine for the purpose of inducing sleep, and will give a few cases in point:

Case 1.—Mrs. H., æt. 40. This lady has been troubled for about ten days with a teasing, irritative pharyngeal cough, much aggravated at night time, rendering it impossible for her to lie down. The fauces, the palate, and the whole pharynx were highly congested. Topical and general remedies were used for several days, with but partial and temporary relief. Upon the same evening that I first read this paper of Dr. Behrend's, I gave this lady one drachm of the bromide of potassium in one ounce of water at bedtime, inducing her to hold it for some time in the mouth and gargle the throat with it before swallowing it. The remedy had a most happy effect; she slept comfortably till about four o'clock in the morning; she then repeated the same dose, and slept till after ten o'clock. At four p.m. she took one drachm of the bromide in a tumblerful of water, and slept an hour on the sofa. At ten o'clock p.m. another drachm of the bromide was taken, washing the mouth and gargling the throat well before swallowing the solution. She had a comfortable night, free from the irritative cough. In the next fifty-six hours four drachms more of the bromide were taken, making eight drachms in seventy-two hours. She had no headache or other unpleasant symptoms; the bowels were free; the urine secreted in large quantities; the irritation of the pharynx had entirely subsided.

Case II.—A young lady, æt. 18, was attacked during the night with

rigors, followed by tumultuous action of the heart, and palpitations. When I first saw her in the morning she had general febrile symptoms, but her greatest complaint was of an intense, burning, pungent heat and pain, almost circumscribed between the seventh and ninth ribs, and extending up over the pectoralis major, and over the whole of the left breast. The clothes were all loose upon her, as she said she could not bear them to press against her on the left side, nor could she lie for a minute upon that side; the left mamma was swollen, the nipple erectile, reddened, and tender. Late in the afternoon vivid red patches had made their appearance between the seventh and eighth ribs, being first noticed near the spine, and each one becoming developed by precursory lancinating pains. The breast was also entirely circumscribed by three distinct vivid patches, the first one appearing about two inches below the nipple, and the others appearing consecutively, circumscribing the breast and meeting the line of the same distinct patches that was at the same time forming between the ribs. I had an opportunity to witness the invasion of this acute attack of *herpes zoster*, for such it proved to be, induced no doubt by sleeping during a warm night with the windows open, and with but one garment upon her. She passed a restless and sleepless night, and was unusually nervous and irritable during the next day. At bedtime I gave her a drachm of bromide of potassium in a tumblerful of water; it relieved the nervous irritability, the itching, burning heat of the herpetic eruption, but she did not sleep. At one o'clock a. m. I repeated the dose of one drachm of the bromide. In half an hour she was asleep, and slept comfortably until nearly eleven o'clock the next morning, awaking very much refreshed and relieved. Half-drachm doses of the bromide were given every four hours, if awake during the next three days, when it was discontinued, as no medicinal treatment was needed. The disease progressed favorably; desquamation took place on the sixth day.

Case III.—A low, vulgar servant woman had left her place of service and gone on a spree, which she had continued until she was brought up by an attack of delirium tremens. She had been treated for four days before I saw her with opium in large doses, without inducing sleep. The pupils of the eyes were intensely contracted from the effects of the opium. I gave a drachm of bromide of potassium; it did not induce sleep, but relieved the intense itching of the face caused by the opium. In three hours I repeated the drachm of bromide; it had the effect of quieting her, and she lay passively upon the bed, but she did not sleep. They told me she had not passed any water for three days. I did not like to repeat the bromide if this was the case, fearing that I might produce congestion of the kidneys. She endeavored to urinate, but could pass none. I used

the catheter, and removed, I should think, nearly two quarts of urine. I immediately gave another drachm of the bromide, and within an hour she was fast asleep, from which, after eight hours, she was aroused with great difficulty. The pupils of the eyes were still much contracted, and a great part of the opium was undoubtedly yet in the system.

I have presented these three cases, showing the action of bromide of potassium in acute diseases; I could present other cases showing its action in sub-acute or chronic disorders, but such cases would much resemble those already described by Dr. Behrend.

One important question arises in the administration of these large doses—Is there no fear of producing congestion of the kidneys? We know that there is danger of this result with nearly all soluble saline substances when administered in large doses, especially large doses frequently repeated. Tully's numerous cases of the administration of chlorate of potash in large doses are instances in point. The death of Dr. Fountain by a large dose of the same medicine, is still more *apropos*. I have seen many instances of death (while experimenting upon animals) from congestion of the kidneys, where, without post-mortem examination, death might be attributed to other causes; and I have thus learned to watch most carefully the secretion of urine while administering medicines that are readily absorbed and are chiefly carried off by renal secretion. Dr. Behrend says:—"Dr. Brown-Séquard has informed me that he has given it with perfect safety for several successive weeks in drachm doses." I have not administered it so frequently or so persistently as this; but I have seen two instances in which I had to discontinue the medicine, owing to its irritative action on the kidneys. In both of these instances it had but little sedative action.

What is its *modus operandi?* I confess to a certain extent to have used this remedy experimentally, but having most excellent authority for doing so; for whatever Dr. Brown-Séquard "has used with perfect safety and success for several weeks," and has recommended to his friends, cannot, I know, be attended with much danger if administered by skilful hands. From the small experience that I have had with bromide of potassium in large doses, it seems to me to be eliminative in its general action, but to act specially as a nervous sedative. Further researches and experiments upon animals are necessary to determine its exact *modus operandi*. —*American Medical Times, New York.*

# Canada Medical Journal.

MONTREAL, OCTOBER, 1864.

The last number of this journal contained an article headed "The Lungs of Cities," a subject of all importance in a sanitary point, and one which having a public bearing is in all earnestness recommended to the consideration of our City Council. The question of the desirableness of a park has been mooted, and we trust the scheme will be carried through with public spirit, having in view the general good of the entire city, without reference to those sectional differences, which appear to divide the councils of our corporation.

What is good for the eastern section of the city is equally necessary for the west. It is in every way, therefore, desirable that no contracted views shall guide those chosen for the work in selecting a proper site, and that the saving of a few hundred pounds will not have any weight in obtaining suitable and sufficiently extensive grounds for this purpose.

It should be borne in mind that this is a matter which will affect the comfort and healthfulness of our city; it is to be hoped, therefore, that no narrow-minded policy will be adopted in a matter which will be judged of by coming generations. In connection with the subject of pure air, we propose to say a few words on the pernicious system of overcrowding buildings. It is the custom here as elsewhere to cover every patch of ground with houses. Persons with small means acquire a piece of ground and as a matter of speculation cover every inch with dwellings, dwellings of such a class that no person who can do otherwise would occupy them. These wretched tenements are forced upon the poor man at a rental considerably greater in proportion than what is paid by his more fortunate neighbor, who, from having larger means, can afford greater luxuries in the way of house accommodation. The system of over-crowding dwellings is exceedingly pernicious; it acts upon the air and healthfulness of entire districts, so that the necessities of the poor affect the comfort and safety of the rich. This is no idle theory, but one capable of demonstration, to any person of ordinary intelligence. In passing through

the crowded districts of our city, the air is foul, pestiferous, redolent with unhealthy odors; can it be wondered that such a state of things is followed by disease and death? Pass into the houses, and possibly you may hear the moaning cry of a sickly or dying infant; enquire the cause, you will be told it is the teeth or worms, or some such disease; it may be this is their only child, the mother having borne a large family, and all have died from the same cause. It has frequently been our lot to visit such localities, and hear these doleful tales from the inmates; we have met with cases where the parents gave every indication of robust health and to whom a family of ten children had been borne, but not one of them survived; all were dead, had died before they were two years old, some before they were two months. These facts contain a moral which should be carefully studied and acted upon. If, in spite of advice given in a kindly spirit, persons are found so doltish, so positively wicked as to persist in a course acknowledged to be erroneous, then we say it becomes the duty of those in authority to limit their operations. These parties are preying on the lives of their fellow beings, actually grinding money out of the misery and necessity of the poor man. The citizens of Montreal pay in cheerfully large amounts each year to the city chest: in return they look for a proper and judicious expenditure of these means, that they may be supplied with the necessaries of existence. Drainage, water, passable roads, and light are indispensables; are not health, comfort, cleanliness, and pure air equally so? If, by permitting the building tier on tier and back to back houses in back yards, courts, &c., the air and healthfulness of the entire city is affected, is it not our duty to cry out against such things, pointing out the fearful consequences, and is it not equally the duty of those who have the power, to legislate upon and stop this evil. After the fire of 1852 the corporation passed a bye-law whereby in future all buildings shall consist of stone or brick, and be covered with tin, sheet-iron, or some fire-proof material. We have just passed through an epidemic of scarlet fever and small pox. Few indeed were the homes uninvaded by one or other of these fearful maladies. We do not pretend to tax the occurrence of these epidemics on these crowded courts; still, it is a matter of observation that wherever either disease occurred to the inhabitants of these houses, or in the neighborhood, it generally assumed a more virulent type. It becomes, therefore, a fitting opportunity for the corporation to consider the subject of crowding buildings, and limit their number according to the size of the ground.

There are certain laws laid down by the Creator which govern these things; any deviation therefrom is visited by plague and pestilence, not as a judgment but simply on account of the laws being ignored. The Almighty

does not step aside to visit a community with his wrath, unless, by the neglect of certain known laws, they earn for themselves such visitation.

There is little doubt that the London of 1664 needed the visitation of plague, pestilence, and fire to make it the London of 1864. We write with a view of calling public attention to this subject and of endeavoring, if possible, to force on our city the adoption of a code of sanitary regulations.

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## PHYSICIANS' FEES.

The rapid advance in everything, which our neighbors of the United States have had to submit to, owing to the depreciation of their currency, has at last told upon the medical profession, and the result has been a corresponding advance in the scale of charges for professional visits and consultations. In Boston the Medical Association has fixed the following tariff. For a visit in any case, $3 to $5. Visits in regular attendance (medical, surgical, or obstetrical) $3; extraordinary service, detention, or unusual responsibility, the fee to be proportionately increased; consultation visit, $5 to $10; visit between 9 a. m. and 8 p. m., $5 to $10; for attendance out of the city, mileage to be charged for short distances, $1 to $2, and on railroads from 50 cents to $1 per mile. Office advice, $3 to $20; for opinions involving questions at law, in which the physician may be subpœnaed $50; for detention in court on matters involving a professional opinion, $50 a day; obstetrical attendance, $24 to $60, with extra charges for detention, consultations, or obstetrical operations.

Other portions of the United States have made the same move, and there is no doubt but that it must become universal. In our own city for the last twenty years, living has slowly though steadily increased, till at this moment the necessaries of life are fully double what they were then; and we presume, at all events to some extent, that this is applicable to every city in the Province, and, in a lesser degree, in the country. Physicians' charges in Montreal are about as varied as they well can be, and we think the profession is unmindful of its own interests, when they allow it so to continue. Some seventeen years ago the Medico-Chirurgical Society of Montreal adopted and published a tariff of charges, which is now almost totally disregarded. What we consider essential is a thorough understanding among medical men, as to the charges to be made for professional services, and a strict adherence to them. We have frequently heard it mentioned by junior practitioners, that it is a constant source of worry and annoyance to them after presenting a bill for attendance, which, according to the supposed charges

was just and reasonable, to be informed "that Dr. So-and-So attended Mr. ——— 's family, where he had a much longer attendance, and his bill was not much more than half of yours." This is unjust to those who are struggling to gain a foothold in the profession, and we think it would not be unbecoming in the senior practitioners to thoroughly revise the medical tariff, and adhere strictly to it when adopted.

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A coroner's inquest was held recently at Ely, County of Bedford, on the body of a young woman who died suddenly, supposed to have been from poison.

It appears that a Mr. Violatti, a Frenchman, settled as a farmer in Ely in 1850; since that period, from being a man considerably above the mass in point of education, he has occasionally performed the duties in his immediate *voisinage*, of doctor, notary, magistrate, secretary to the municipality, sheriff, &c., &c. Mr. Violatti, who formerly studied and practised medicine in France, has had such success with his patients as to have acquired the confidence of the public, and appears to have had a large number of patients.

We are told by the Défricheur that having been called to the young woman who was very ill he gave a dose of medicine which was poisonous, and, half an hour after taking it, she died. The particular drug used in this case is not indicated. A verdict was rendered to the effect that the deceased came to her death through poison administered by Mr. Violatti, and the coroner's warrant was issued for his arrest. In the absence of all evidence, as to the description of poison used, its quantity, and proofs of its existence in the stomach, the case must break down.

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The *London Observer* notices a new preparation of paper, the uses of which are at once novel and unique. Tubes made of this paper answered the purpose for rocket firing, standing the test, and being much lighter, are deemed more suitable than those made of metal. Slabs of this paper one inch thick when tried by bullet and ball were found to offer a resistance equal to ten inches in thickness of solid oak. The difference being in favor of the paper in other respects, a projectile passing through the paper makes a clean round hole, whereas, in the case of the oak, the wood is fractured and torn in all directions. The slabs or boards are easily fixed to the framework of ships, and are well adapted for the purposes of shipbuilding. The advantages over timber or iron are, that they are non-absorbent, they do not require copper sheathing to prevent fouling,

as neither animal nor vegetable life flourishes on their surface; furthermore they are incombustible, and if struck forcibly they will bend or be bulged in without fracture. Above all, this paper has the advantage over timber and iron in the matter of cost. M. Szerlemy, the inventor, is now engaged in the construction of light field-pieces for mountain warfare, which are expected to answer every purpose.

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## THE SANITARY COMMISSION OF THE UNITED STATES ARMY—ITS WORKS AND PURPOSES.

This work, embracing about 300 pages, has been in our possession some weeks, and its perusal has given us not a little pleasure. The idea of a Sanitary Commission is not an original one with our neighbors, but is borrowed from ourselves. Who can forget that terrible winter of the Crimean campaign, when our brave troops were melting away; when the mortality had reached the fearful aggregate of 97 per cent. and which, owing to a Commission somewhat similar to this, was reduced to 1 per cent? The United States Commission is indeed a vast one—giving advice—and supplementing relief. Whatever may be our political feelings with regard to this fearful strife, we can but sympathise with this Commission in its labors to alleviate the horrors of a war which we hope may soon be brought to a close.

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## MEDICAL NEWS.

General Cameron, commanding the forces in New Zealand, in a dispatch thus speaks of the courage displayed by three medical officers during the recent engagement with the Maories: "I must particularly mention the valuable services of Deputy Inspector General Mowat, Surgeon McKinnon, 57th Regt., and Assistant-Surgeon Manlay, R. A., who fearlessly exposed themselves to fire in attending the wounded, the greater part of whom fell close to the enemy's works." — A monument is being erected at Netley, near the Royal Victoria Hospital, to the memory of the medical officers, seventy in number, who lost their lives on service during the Crimean campaign. It will be fifty feet high. The foundation stone was laid by the Prince of Wales on the 8th of August.

Dr. Livingstone has arrived from Africa. — Professor Pope of St. Louis recently removed a fœtal skeleton of extra uterine formation through the rectum, and the patient recovered. — The London College of Physicians has decided to grant its Diplomas only to persons

who pass its examinations. — A private of Her Majesty's 19th Regt. in India, has been sentenced to penal servitude for life, for striking an Assistant Surgeon. — The officers last quarter condemned a little over twenty-seven tons of meat, in London, as being unfit for human food. — Dr. Hicks, of Kentucky, mentions that he saw a man who was shot, the ball passing through the left ventricle of the heart, *who was moved four miles, and lived forty-eight hours*, and was perfectly rational. The nature of the wound was revealed by a post mortem examination. — During the epidemic of Small Pox last winter in London, the number of patients admitted into the Small Pox Hospital was 1537. The deaths among the un-vaccinated was 47 per cent.; among the vaccinated 9.9 per cent. The mean death rate, extending over a series of years, amongst the un-vaccinated has been 35 per cent., among the vaccinated $6\frac{3}{4}$ per cent.

Dr. Mapother, Professor of Hygiene at the College of Surgeons, Ireland, has been appointed health officer for the city of Dublin. The salary is 100 guineas. His duties will be to direct the labor of the inspector of nuisances and his two assistants, when any nuisance to the public health may arise; to advise the city in taking means to prevent disease, and furnish a weekly list of the causes of death.

*The Contagiousness of Consumption* is the subject of a paper read before the Boston Society for Medical Improvement, April 18, 1864, by Henry L. Bowditch, M.D. His investigations lead him to believe that consumption is not *contagious* in the usual acceptation of that word, but that it may be *infectious* to a certain extent; so that, by long and constant attendance upon those sick with this disease, and living in an atmosphere loaded with the emanations from the lungs of such patients, the health may be undermined, and phthisis set in. For this reason he would warn a wife, or a sister, or a near female friend, from too close a devotion to a consumptive husband, sister, or friend. Sleeping in the same bed, or even in the same room with the sick one, should be avoided. The attendant should pay strict attention to hygienic rules, especially as regards diet and frequent exercise in the open air.

*Anæsthesia from Chloroform prolonged by the Hypodermic Injection of Morphia.*—Professor Nutbaum, of Munich, reports a number of cases of anæsthesia being prolonged from eight to twelve hours by injecting beneath the skin, while the patient is under the influence of chloroform, one grain of the acetate of morphia. The patient sleeps, breathing regularly and calmly, during the most severe and prolonged operation, and finally awakes as if he had just passed through a chloroform narcotism.

## MORTALITY OF THE CITY OF MONTREAL IN JULY, 1864.

*Compiled from the Cemetery Returns, by G. E. Fenwick, M.D.*

MOUNT ROYAL CEMETERY.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. |
| Infantile Debility | 6 | 3 | 9 | .. | 9 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 2 | 1 | 1 | .. | 9 | .. |
| Senile Debility | 3 | 2 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | 1 | .. | .. | .. | .. | 2 | 1 | .. | 1 | 1 | .. | .. | 1 | 4 |
| Small Pox | 2 | 1 | 3 | .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | 2 | 1 |
| Measles | 1 | 2 | 3 | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | 3 | .. |
| Scarlet Fever | 2 | 9 | 11 | .. | 3 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 7 | .. | 2 | 1 | .. | .. | 7 | 4 |
| Fever | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. |
| Inflammation of Brain | 6 | 1 | 7 | .. | 4 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 2 | .. | .. | 1 | .. | 5 | 2 |
| Apoplexy | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Paralysis | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 |
| Croup | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| Hooping Cough | 1 | 5 | 6 | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 1 | .. | .. | .. | 1 | 6 | .. |
| Diphtheria | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. |
| Inflammation of Lungs | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. |
| Consumption | .. | 4 | 4 | .. | .. | .. | 1 | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | 1 | .. | 1 | 3 |
| Disease of Heart | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Inflam. of Bowels | 1 | 4 | 5 | .. | 1 | .. | .. | 1 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | 1 | .. | .. | 1 | 4 |
| Diarrhœa | 11 | 7 | 18 | .. | 18 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 4 | 4 | 4 | 3 | .. | 2 | 17 | 1 |
| Cholera | 2 | .. | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | 2 | .. |
| Aphthœ | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. |
| Disease of Liver | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 |
| Dropsy | 3 | 1 | 4 | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | 1 | .. | .. | 1 | 3 |
| Gangrene | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| Cancer | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 2 |
| Accidental | 3 | .. | 3 | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | 1 | 2 |
| Total | 45 | 46 | 91 | 1 | 49 | 15 | 3 | 2 | 2 | 5 | 5 | 2 | 5 | 1 | 1 | .. | 1 | 1 | 1 | 13 | 24 | 20 | 13 | 10 | 2 | 6 | 61 | 30 |

ROMAN CATHOLIC CEMETERY.

| Disease. | Male. | Female. | Total. | Still-born | Under 2 years. | 2 to 10 years. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Sours Grises. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 6 | 2 | 8 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 2 | 2 | .. | 2 | 8 | .. |
| Infant. Debility | 112 | 96 | 208 | .. | 208 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 16 | 16 | 6 | 11 | 23 | 28 | 73 | 33 | 190 | 18 |
| Senile Debility | 10 | 6 | 16 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | 7 | 3 | .. | .. | .. | .. | .. | 3 | 2 | .. | 1 | 2 | 1 | 1 | 6 | 11 | 5 |
| Small Pox | 23 | 24 | 47 | .. | 23 | 20 | 2 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 3 | 4 | 2 | 21 | 7 | .. | 7 | 36 | 11 |
| Scarlet Fever | 12 | 17 | 29 | .. | 7 | 21 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 8 | 3 | 6 | 2 | 2 | .. | 7 | 18 | 11 |
| Fever | 2 | 3 | 5 | .. | .. | 3 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 3 | .. | .. | .. | 5 | .. |
| Inflam. Brain | 5 | 2 | 7 | .. | 3 | 3 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 2 | .. | .. | 2 | .. | .. | 2 | 5 |
| Paralysis | 4 | 2 | 6 | .. | .. | .. | 1 | .. | 1 | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 4 | 1 | .. | .. | 4 | 2 |
| Croup | 2 | 2 | 4 | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | 1 | .. | 2 | 2 |
| Hoop'g Cough | .. | 2 | 2 | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | 1 | 1 |
| Consumption | 6 | 18 | 24 | .. | .. | 1 | 4 | 8 | 5 | 4 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 6 | 1 | 6 | 2 | 1 | 5 | 8 | 16 |
| Disease Heart | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 1 | 1 |
| Dentition | 11 | 22 | 33 | .. | 33 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | 6 | 4 | 4 | 2 | 2 | .. | 8 | 27 | 6 |
| Inflam. Bowels | 2 | 1 | 3 | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 2 | 3 | .. |
| Worms | .. | 2 | 2 | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | 1 |
| Diarrhœa | 16 | 12 | 28 | .. | 25 | .. | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 5 | .. | 3 | 3 | 3 | 6 | .. | 8 | 24 | 4 |
| Disease Kidney | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. |
| Dropsy | 1 | 3 | 4 | .. | .. | .. | .. | 1 | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | .. | .. | .. | 4 | .. |
| Gravel | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. |
| Erysipelas | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. |
| Rheumatism | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| Abscess | .. | 2 | 2 | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | 2 | .. |
| Cancer | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Childbirth | .. | 2 | 2 | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | 1 | 1 |
| Accidental | 10 | 2 | 12 | .. | .. | 3 | 2 | 3 | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 3 | 3 | 3 | .. | .. | .. | 1 | .. | 6 | 6 |
| Total | 226 | 223 | 449 | 8 | 299 | 61 | 10 | 17 | 13 | 7 | 6 | 8 | 10 | 7 | 3 | .. | 1 | .. | 1 | 42 | 46 | 35 | 35 | 70 | 63 | 76 | 80 | 358 | 91 |

## MORTALITY OF THE CITY OF MONTREAL IN AUGUST, 1864.

*Compiled from the Cemetery Returns, by G. E. Fenwick, M.D.*

### Mount Royal Cemetery.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 5 | 3 | 8 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | 3 | .. | .. | 1 | .. | 2 | 8 | .. |
| Infantile Debility | 4 | 5 | 9 | .. | 9 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | .. | 2 | .. | 2 | 9 | .. |
| Senile Debility | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 2 |
| Small Pox | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. |
| Measles | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Scarlet Fever | 3 | 2 | 5 | .. | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | .. | .. | .. | 5 | .. |
| Fever | 4 | 1 | 5 | .. | 2 | 1 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | .. | .. | .. | 1 | 3 | 2 |
| Inflammation of Brain | 5 | 3 | 8 | .. | 7 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 1 | 1 | 1 | 2 | 8 | .. |
| Apoplexy | 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. |
| Croup | 2 | .. | 2 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 2 | .. |
| Hooping Cough | .. | 2 | 2 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 2 | .. |
| Diphtheria | 1 | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 |
| Consumption | 4 | 4 | 8 | .. | .. | .. | 3 | .. | 2 | 2 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | 2 | 1 | .. | 2 | 5 | 3 |
| Disease of Heart | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 |
| Inflam. of Bowels | 4 | 2 | 6 | .. | 3 | 1 | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 2 | .. | .. | .. | 1 | 4 | 2 |
| Diarrhœa | 2 | 5 | 7 | .. | 7 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | 1 | 2 | .. | 1 | 7 | .. |
| Cholera | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. |
| Disease Liver | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 |
| Dropsy | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 |
| Cancer | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Erysipelas | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tetanus | .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 |
| Child birth | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Accidental | 4 | 1 | 5 | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | 2 | .. | .. | .. | 2 | 3 |
| Total | 45 | 30 | 75 | 8 | 36 | 9 | 5 | 5 | 2 | 4 | 1 | 3 | 1 | 1 | .. | .. | 3 | .. | 1 | 12 | 15 | 9 | 12 | 9 | 2 | 12 | 58 | 17 |

### Roman Catholic Cemetery.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Sœurs Grises. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 6 | 2 | 8 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 2 | 2 | 1 | .. | .. | 2 | 8 | .. |
| Infant. Debility | 97 | 75 | 172 | .. | 172 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 11 | 14 | 4 | 13 | 29 | 23 | 53 | 23 | 157 | 15 |
| Senile Debility | 3 | 3 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | 4 | 1 | .. | .. | 5 | 1 |
| Small Pox | 16 | 11 | 27 | .. | 8 | 18 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | 1 | 1 | 14 | 1 | .. | 4 | 20 | 7 |
| Measles | 2 | 2 | 4 | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | .. | 1 | 4 | .. |
| Scarlet Fever | 8 | 15 | 23 | .. | 9 | 14 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 7 | 1 | 4 | 3 | 3 | .. | 2 | 18 | 5 |
| Fever | 1 | 4 | 5 | .. | .. | 2 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | .. | 1 | 4 | 1 |
| Inflam. Brain | 2 | .. | 2 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 1 | 1 |
| Apoplexy | 2 | 2 | 4 | .. | .. | .. | .. | .. | 2 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | .. | .. | .. | .. | 3 | 1 |
| Paralysis | 3 | 1 | 4 | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | 1 | 4 | .. |
| Epilepsy | 2 | .. | 2 | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | 1 |
| Croup | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| HoopingCough | 2 | .. | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 2 |
| Diphtheria | 1 | 1 | 2 | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 1 | 1 | 1 |
| Inflam. Lungs | 2 | .. | 2 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 2 | .. |
| Consumption | 7 | 11 | 18 | .. | .. | 1 | 2 | 8 | 5 | 1 | .. | 1 | .. | .. | .. | .. | 1 | 1 | 1 | 1 | 3 | 5 | 2 | 4 | .. | .. | .. | 7 | 11 |
| Disease Heart | .. | 2 | 2 | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 |
| Dentition | 27 | 23 | 50 | .. | 50 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 6 | 14 | 1 | 2 | 10 | 9 | .. | 7 | 43 | 7 |
| Inflam. Bowels | 3 | 5 | 8 | .. | .. | 1 | 1 | .. | 1 | 1 | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 1 | 1 | 2 | .. | 1 | 6 | 2 |
| Diarrhœa | 27 | 28 | 55 | .. | 48 | 4 | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11 | 7 | .. | 7 | 6 | 15 | .. | 9 | 45 | 10 |
| Disease Liver | .. | 1 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| Dropsy | 2 | 6 | 8 | .. | .. | 1 | .. | .. | 1 | 3 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 4 | 1 | .. | .. | 1 | 1 | 7 | 1 |
| Cancer | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| Childbirth | .. | 2 | 2 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 2 |
| Accidental | 8 | .. | 8 | .. | .. | 1 | 2 | 1 | .. | .. | 3 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 2 | .. | 4 | 4 | 4 |
| Total | 221 | 196 | 417 | 8 | 292 | 49 | 8 | 15 | 11 | 8 | 10 | 8 | 4 | 2 | 1 | 1 | 2 | 1 | 4 | 38 | 64 | 26 | 36 | 73 | 61 | 55 | 57 | 341 | 76 |

# ABSTRACT OF METEOROLOGICAL OBSERVATIONS,

*Taken at the Montreal Observatory, Latitude* 45° 31′ *N. Longitude, 4h. 54m. 11s. W. of Greenwich. Height above level of the Sea* 182 *feet. For the month of July,* 1864.

BY CHARLES SMALLWOOD, M.D., LL.D., D.C.L.

| Day of Month. | Reading of the Barometer, corrected, and reduced to 32° F. | | | Reading of Thermometer. | | | Mean Tension of Vapor. | Mean Humidity of the Atmosphere. | General direction of Wind. | Horizontal movement in 24 hours in miles. | Mean extent of Clouds in 10ths. | Depth of Rain in inches. | Depth of Snow in inches. | Ozone in 10ths. | Weather, &c. | Remarks for the Month. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Highest | Lowest. | Mean. | Max. | Min. | Mean | | | | | | | | | | |
| | Inches. | Inches. | Inches. | | | | | | | | | | | | | |
| 1 | 29.774 | 29.761 | 29.766 | 82.1 | 63.1 | 72.1 | .632 | .804 | W | 46.70 | 6.9 | .... | .... | 0.6 | | Barometer .. Highest, the 18th day, 30.062 inches. |
| 2 | .624 | .502 | .562 | 68.2 | 64.2 | 66.9 | .591 | .897 | N E | 120.98 | 6.0 | 0.047 | .... | 0.1 | Rain. | Lowest, the 2nd day, 29.502 " |
| 3 | .579 | .571 | .574 | 77.4 | 61 4 | 71.7 | .648 | .849 | S W | 46.60 | 6.0 | .... | .... | 1.0 | | Monthly Mean, 29.782 " |
| 4 | .724 | .578 | .674 | 76.7 | 56 2 | 68.6 | .868 | .809 | W bys | 102.09 | 2.6 | .... | .... | 0.6 | | Monthly Range, 0.560 " |
| 5 | .802 | .677 | .757 | 80.1 | 57.2 | 71.2 | .614 | .791 | W | 81.37 | 1.3 | .... | .... | 0.1 | | |
| 6 | .760 | .698 | .724 | 87.9 | 59.1 | 70.2 | .580 | .789 | W | 176.39 | 3.3 | .... | .... | 1.0 | | Thermometer Highest, the 19th day 96°3. |
| 7 | .747 | .679 | .715 | 84.2 | 59.2 | 76.3 | .668 | .758 | W | 21.91 | 0.6 | 0.052 | .... | 0.5 | Rain. | Lowest, the 22nd day, 49°4. |
| 8 | .821 | .741 | .778 | 89.4 | 58.0 | 71.3 | .664 | .763 | N E | 180.30 | 0.6 | .... | .... | 0.0 | | Monthly Mean, 75.19. |
| 9 | .887 | .800 | .843 | 90.4 | 59.0 | 78.9 | .765 | .749 | W | 126.33 | 1·3 | .... | .... | 0.1 | | Monthly Range, 46°9. |
| 10 | .750 | .572 | .674 | 92.1 | 64.2 | 79.7 | .764 | .756 | S W | 100.76 | 6.6 | Inapp | .... | 0.6 | Rain. | Greatest intensity of the Sun's rays, 112°9. |
| 11 | .564 | .541 | .535 | 89.7 | 66.0 | 77.4 | .733 | .802 | W S W | 93.06 | 6.6 | 0.864 | .... | 1.3 | Rain. | Lowest point of Terrestrial radiation, 47°4. |
| 12 | .722 | .655 | .682 | 75.2 | 65.2 | 70.7 | .610 | .819 | W S W | 363.97 | 8.0 | 0.211 | .... | 0.6 | Rain. | Mean of Humidity, .766. |
| 13 | .898 | .840 | .865 | 93.4 | 61.2 | 78.7 | .705 | .696 | W | 48.64 | 0.0 | .... | .... | 0.1 | | Rain fell on 6 days, amounting to 1.295 inches, it was accompanied by Thunder on 2 days. |
| 14 | .998 | .950 | .973 | 94.1 | 64.2 | 83.5 | .782 | .679 | W S W | 30.06 | 2.6 | .... | .... | 0.5 | | Most prevalent wind, S. W. |
| 15 | .958 | .942 | .949 | 96 4 | 68.2 | 84 7 | .786 | .649 | S W | 53.82 | 1.3 | .... | .... | 0.0 | | Least prevalent wind, S. E. |
| 16 | .874 | .800 | .847 | 86.8 | 64.9 | 78.8 | .715 | .743 | SEbyE | 89.08 | 0 0 | .... | .... | 0.0 | | Most windy day the 12th day. mean miles per hour, 15.17. |
| 17 | .994 | .872 | .925 | 95.9 | 63.4 | 82.0 | .761 | .698 | N E | 120.20 | 0.0 | .... | .... | 0.0 | | |
| 18 | 30.062 | .954 | 30.004 | 91.0 | 63.6 | 81.6 | .750 | .684 | W | 217.74 | 0.0 | .... | .... | 0.0 | | Least windy day, the 31st day, mean miles per hour, 0.61. |
| 19 | 29.976 | .879 | 29.917 | 96.3 | 64.1 | 85.1 | .784 | .647 | S E | 45.89 | 0.0 | .... | .... | 0.0 | | |
| 20 | .680 | .533 | .597 | 88.2 | 70.1 | 80.5 | .728 | .713 | S W | 173.81 | 0.0 | .... | .... | 0.0 | | Amount of Evaporation 3.46 inches. |
| 21 | .818 | .796 | .808 | 75.2 | 55.4 | 67.3 | .503 | .752 | NbyW | 180.05 | 6.6 | 0.037 | .... | 0.8 | Rain. | |
| 22 | .799 | .766 | .785 | 64.3 | 49.7 | 60.8 | .441 | .767 | WbyN | 196.67 | 7.6 | .... | .... | 0.6 | | |
| 23 | .751 | .711 | .730 | 80.0 | 49.7 | 71.1 | .881 | .749 | S W | 215.87 | 0.0 | .... | .... | 0.1 | | |
| 24 | .782 | .764 | .772 | 84.6 | 64.1 | 76.5 | .681 | .762 | W S W | 111.00 | 0 0 | .... | .... | 0.0 | | |
| 25 | .852 | .739 | .812 | 79.3 | 58.2 | 70.0 | .506 | .770 | N E | 241.28 | 0.0 | .... | .... | 0.1 | | |
| 26 | .674 | .547 | .613 | 79.8 | 58.0 | 71.2 | .581 | .768 | NbyW | 74.30 | 10.0 | 0.084 | .... | 1.0 | | |
| 27 | .802 | .676 | .754 | 87.7 | 59.9 | 76.7 | .666 | .736 | S W | 172.54 | 3.3 | .... | .... | 0.3 | | |
| 28 | .808 | .600 | .719 | 82.1 | 58.2 | 77.8 | .636 | .727 | S W | 73.30 | 10.0 | .... | .... | 0.3 | | |
| 29 | .617 | .572 | .594 | 78.4 | 58.0 | 69.8 | .535 | .749 | N W | 120.18 | 3.3 | .... | .... | 1.6 | | |
| 30 | .555 | .547 | .551 | 91.4 | 58.4 | 79.6 | .767 | .770 | S W | 65.98 | 0.5 | .... | .... | 0.3 | | |
| 31 | .690 | .577 | .646 | 94.3 | 62.1 | 82.5 | .790 | .708 | S W | 14.71 | 0.0 | .... | .... | 0.0 | | |

# ABSTRACT OF METEOROLOGICAL OBSERVATIONS,

*Taken at the Montreal Observatory, Latitude 45° 31′ N. Longitude, 4h. 54m. 11s. W. of Greenwich. Height above the level of the Sea 182 feet. For the month of August, 1864.*

BY CHARLES SMALLWOOD, M.D., LL.D., D.C.L.

| Day of Month. | Reading of the Barometer, corrected, and reduced to 32° F. | | | Reading of Thermometer. | | | Mean Tension of Vapor. | Mean Humidity of the Atmosphere. | General direction of Wind. | Horizontal movement in 24 hours in miles. | Mean extent of Clouds in 10ths. | Depth of Rain in inches. | Depth of Snow in inches. | Ozone in 10ths. | Weather, &c. | Remarks for the Month. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Highest | Lowest. | Mean. | Max. | Min. | Mean | | | | | | | | | | |
| | Inches. | Inches. | Inches. | | | | | | | | | | | | | |
| 1 | 29.583 | 29.539 | 29.534 | 96.2 | 74.4 | 85.0 | .803 | .667 | S by E | 120.71 | 4.6 | Inapp | .... | 0.3 | Rain. | Barometer ... Highest, the 19th day, 30.014 inches. |
| 2 | .582 | .568 | .573 | 86.0 | 68.2 | 76.4 | .728 | .807 | NbyW | 73.59 | 4.6 | .... | .... | 1.0 | | Barometer ... Lowest, the 27th day, 29.251 " |
| 3 | .660 | .591 | .625 | 72.8 | 58.2 | 67.9 | .489 | .729 | N E | 211.41 | 8.0 | Inapp | .... | 1.1 | Rain. | Barometer ... Monthly Mean, 29.664. " |
| 4 | .589 | .564 | .574 | 68.2 | 59.0 | 64.8 | .502 | .823 | N E | 173.70 | 6.6 | 0.043 | .... | 1.0 | Rain. | Barometer ... Monthly Range, 0.833. " |
| 5 | .765 | .653 | .697 | 86.7 | 58.4 | 76.6 | .747 | .822 | S W | 50.28 | 6.0 | .... | .... | 1.0 | | |
| 6 | .846 | .702 | .799 | 89.8 | 62.2 | 76.2 | .695 | .765 | S W | 86.91 | 8.0 | .... | .... | 0.3 | | Thermometer Highest, the 1st day, 96° 2. |
| 7 | .712 | .700 | .705 | 90.2 | 61.1 | 77.1 | .734 | .785 | S W | 56.29 | 4.6 | .... | .... | 1.0 | | Thermometer Lowest, the 30th day, 55° 0. |
| 8 | .834 | .714 | .786 | 79.1 | 62.0 | 71 2 | .558 | .800 | W | 95.20 | 5.3 | .... | .... | 1.0 | | Thermometer Monthly Mean, 71.17. |
| 9 | .546 | .506 | .537 | 89.2 | 62.4 | 81.5 | .844 | .801 | N N W | 65.54 | 3.3 | .... | .... | 2.0 | | Thermometer Monthly Range, 41° 2. |
| 10 | .501 | .474 | .483 | 84.6 | 60 0 | 79.1 | .776 | .800 | S E | 269.89 | 0.0 | .... | .... | 1.0 | | Greatest intensity of the Sun's rays, 114° 0. |
| 11 | .611 | .599 | .640 | 95.1 | 67.0 | 80.8 | .775 | .802 | NbyW | 111.52 | 0.0 | .... | .... | 0.3 | | Lowest point of Terrestrial radiation, 51° 4. |
| 12 | .704 | .672 | .692 | 85.1 | 58.9 | 72.9 | .640 | .742 | NbyW | 48.74 | 5.3 | .... | .... | 1.0 | | Mean of Humidity, .748. |
| 13 | .588 | .529 | .534 | 94.2 | 64.7 | 78.2 | .705 | .716 | S W | 167.93 | 6.0 | .... | .... | 1.3 | | Rain fell on 10 days, amounting to 2.126 inches, and was accompanied by Thunder on 4 days. |
| 14 | .741 | .600 | .650 | 87.2 | 68.2 | 77.4 | .761 | .807 | W | 124.40 | 1.3 | .... | .... | 1.3 | | Most prevalent wind, W. |
| 15 | .812 | .761 | .749 | 94.2 | 61.0 | 77.6 | .694 | .716 | W | 187.21 | 0.3 | .... | .... | 0.3 | | Least prevalent wind, N. by W. |
| 16 | .891 | .871 | .878 | 87.2 | 66.4 | 78.7 | .726 | .730 | W | 10.13 | 6.0 | .... | .... | 1.0 | | Most windy day, the 10th day, mean miles per hour, 11.24. |
| 17 | .719 | .715 | .717 | 74.1 | 68.1 | 70.9 | .596 | .802 | N E | 77.16 | 10.0 | Inapp | .... | 0.3 | Rain. | |
| 18 | .874 | .798 | .825 | 81.6 | 56.0 | 69.1 | .516 | .781 | N E | 162.96 | 0.0 | .... | .... | 0.3 | | Least windy day, the 16th day, mean miles per hour, 0.42. |
| 19 | 30.014 | .928 | .979 | 82.3 | 55.4 | 70.9 | .525 | .702 | N W | 130.08 | 8.0 | .... | .... | 0.3 | | |
| 20 | 29.990 | .984 | .973 | 78.9 | 58.4 | 69.7 | .568 | .785 | W | 58.38 | 10.0 | .... | .... | 1.0 | | Amount of Evaporation, in inches, 2.24. |
| 21 | .987 | .770 | .899 | 76.0 | 65.0 | 73.0 | .624 | .792 | N E | 27.00 | 8.0 | .... | .... | 0.3 | | Aurora Borealis visible on 1 night. |
| 22 | .734 | .542 | .636 | 82.4 | 60.0 | 74.8 | .646 | .760 | S W | 96.07 | 3.3 | Inapp | ... | 0.5 | Rain. | |
| 23 | .647 | .548 | .609 | 74.1 | 66.0 | 70.3 | .603 | .816 | W | 120.47 | 8.0 | 0.952 | .... | 1.3 | Rain. | |
| 24 | .737 | .714 | .750 | 84.4 | 63.0 | 74.7 | .671 | .791 | W | 170.61 | 6.3 | .... | ..... | 1.3 | | |
| 25 | .519 | .423 | .488 | 88.2 | 65.2 | 79.0 | .753 | .816 | W | 94.02 | 7.6 | .... | .... | 1.0 | | |
| 26 | .571 | .424 | .814 | 83.2 | 62.6 | 72.1 | .675 | .889 | W | 36.56 | 6.6 | 0.815 | .... | 1.3 | Rain. | |
| 27 | .311 | .254 | .281 | 75.9 | 61.1 | 68.7 | .628 | .799 | S E | 18.40 | 5.6 | 0.216 | .... | 1.3 | Rain. | |
| 28 | .524 | .424 | .486 | 75.0 | 60.0 | 66.9 | .546 | .826 | W | 122.00 | 1.6 | .... | .... | 1.0 | | |
| 29 | .847 | .424 | .494 | 74.0 | 58.1 | 65.7 | .539 | .871 | WbyN | 223.42 | 6.6 | Inapp | .. . | 1.3 | Showers. | |
| 30 | .796 | .616 | .677 | 69.4 | 55.0 | 59.1 | .429 | .874 | WbW | 128.91 | 6.0 | Inapp | .... | 1.0 | Rain. | |
| 31 | .829 | .811 | .819 | 74.9 | 53.2 | 65.0 | .510 | .811 | N W | 78.80 | 0.0 | .... | | 0 0 | | |

# CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*On the Pathology and Treatment of Ileus.* By George Paton, M.D: M.R.C.S.E., &c., Bowmanville, C. W.

I. The vermicular movement of the intestines consists of a series of contractions and relaxations, extending from the stomach to the rectum. In contraction an active force is exerted by the muscular fibre, but in relaxation, this power ceases, and the fibres return to their previous condition. There are no facts, says Muller, to justify the supposition, that muscles possess the power of actual expansion. Bichat thought that this power was possessed by the heart in the act of dilatation, and Cruveilhier appears to entertain the same opinion, considering that the force and rapidity with which the heart dilates, entitle it to the character of an active movement.

It must however be considered a general law in the animal economy, that when we witness over-distention of muscular fibre, the muscle has existed in a passive state, and been acted on by an exterior agency. This is particularly seen in over-distension of the bladder from the retention of urine—the accumulated fluid exerting a pressure against the parietes of the viscus, and stretching the muscular fibre. The same effect is observed in the great dilatation of the stomach or intestines of cattle, which have taken food, that generates a large amount of gas; for this gas, confined within the cavity, distends its walls and greatly enlarges its dimensions. The paunch of ruminants is so constructed, that the food which has been swallowed, must be returned to the mouth from the first and second stomachs, to undergo the process of mastication; which being completed and the morsel again swallowed, it enters the third, but not the first and second stomachs. When the paunch then becomes distended with food or air, its longitudinal fibres are stretched, and the walls or sides of the œsophageal canal brought into close apposition, rendering the cavity a shut sac; in consequence of

which it often becomes enormously enlarged before an exit can be given to the gas. Relief may be afforded by perforating the stomach through the walls of the abdomen, or by the introduction of an instrument along the œsophagus to allow the escape of the gas. When these means are not adopted, the stomach often ruptures by the great distention which it sustains. And this may take place before inflammation commences.

Similar effects are produced in the stomach and intestines of the horse, during an attack of what is termed flatulent colic. When the animal has taken food difficult of digestion, or that gives rise to fermentation, an extrication of gas commences distending the stomach and intestines, and producing an attack of ileus in its severest form. And if the fermentation of the gas be not arrested, or if the gas be not speedily removed from the distended bowel, the most serious effects are produced. In a post mortem examination which I lately made, the animal dying after four hours' illness, the stomach had ruptured from the great distention to which it was subjected, and its contents pressing on the pyloric orifice, prevented the further escape of the gas from the bowels. The whole of the intestines, from the stomach to the rectum, were greatly distended with gas, and no contraction could be discovered in any part of the tube. Digestion seemed to have been arrested in the stomach, as scarcely any chyme was found in the duodenum which was filled with air, the cœcum was also enormously distended with gas, but contained a small quantity of water; no appearance of inflammation could be detected in any part of the intestines, but they everywhere maintained their natural hue, except a slight blush of redness along the lower curvature of the cœcum, where the blood vessels enter the bowel.

As no flatus could be expelled, nor evacuation of the bowels obtained, during the attack of the disease, it appears that the extrication of gas in large quantities distended the bowel and deranged its action, and that on the gas continuing to be generated, whilst the bowels ceased to perform their function, the walls of the stomach gave way under the great distention to which it was subjected.

That this is the case appears from the fact, that no trace of inflammation could be detected in the ruptured coats of the stomach, when examined with the greatest care; and that in other cases when the disease has not proceeded far, if medicine be administered which promotes the absorption of the gas, the animal often speedily recovers, whilst in some cases relief has been obtained by perforating the cœcum through the walls of the abdomen, to allow the escape of the gas.

Hence it appears that when the muscular tissue of the intestinal canal is subjected to strong and sudden distention, and the force continued

for a considerable time without relaxation being obtained, the contractility of the part becomes weakened and impaired, or even paralysed. This is the way in which loss of muscular power is produced in the intestines in cases of ileus. And the more rapidly the bowel is distended, the greater is the effect produced, and the sooner the muscular power is destroyed.

II. But ileus may be produced in a different manner, and proceed to a fatal termination, which is distinctly recognized in the horse on post mortem examination. A portion of intestine is found greatly contracted, —reduced to a very small calibre,—frequently not exceeding five or six inches in extent, but sometimes more, and often occurring in several parts of the bowels, completely obstructing the descent of fæcal matters along the tube, and the gas that has been generated. That this contracted portion is the original source of the disease, appears from the fact that its diameter is much smaller than is ever met with in the natural state of the bowels —sometimes resembling a cord, and totally impervious to air or water being forced along it.

The disease is liable to be produced in horses by drinking large quantities of cold water when they are heated, or by eating some acrid herbs in the pasture, which irritates the mucous membrane of the bowels, and produces strong reflex or spasmodic action of the part. The attack commences suddenly, and the excited but irregular peristaltic action that ensues, and proceeds along the tube, making repeated efforts to overcome the obstruction, causes the most intense suffering to the animal, and sometimes terminates in intus-susceptio, the contracted part passing into the portion of the bowel situated above or below it. The case may proceed rapidly to a fatal termination before inflammation has commenced, or proceeded far; showing that it was the irregular and obstructed action of the bowels, that produced death. In these forms of ileus, the other parts of the intestines are not so much inflated as in flatulent colic, but the distention is produced in the same manner, the confined gas exerting a pressure against the muscular fibre of the bowels, and enlarging the area and diameter of the gut.

In other cases, in addition to these appearances, we find distinct evidence of inflammation having attacked the muscular tissue of the bowels, as manifested by a blush of redness—dark and livid marks—or by the parts passing into gangrene. The bowel is easily torn, and gives way on being handled. We have seen the parts so softened by disease, that on reflecting the walls of the abdomen, the bowels ruptured, allowing the gas and liquid fæces to escape with great force from the intestines, and in these cases, the disease had not been of long standing, the attack being severe, and proceeding rapidly to a fatal termination.

III. We know from experiments on living animals that when a chemical or mechanical stimulus is applied to a point of the intestinal canal, it is succeeded by strong contractions of the part, which continue for some time after the stimulus has been removed. (Muller), and strong spasmodic action of the urethra occurs from irritation of its mucous membrane, giving rise to suppression of urine—paralysis of the bladder from over-distention of its muscular fibres. On the same principle, irritation applied to the mucous membrane of the bowels, by an acid, or indigestible substance passing along the canal, produces strong reflex or spasmodic action of the part. In this manner we are able to account for the different portions of intestine found in a state of great contraction, in the horse after fatal cases of ileus; whilst the other portions of the intestines are distended with flatus or accumulated fæces from the strong peristaltic action pressing forward the contents of the canal, against the obstruction that existed.

IV. Inflammation is not the cause of the dilatation of the intestine that occurs in ileus, for we have seen that the disease may proceed to a fatal termination before inflammation has commenced. Besides, when inflammation attacks muscular fibre, it produces softening and loss of power; the parts easily giving way under pressure or traction—effects diametrically opposed to those of active expansion. "Let the student examine inflamed muscle; he will find the structure weakened, so that it easily gives way under pressure and traction, he will see under the microscope, that the substance tends to fall into irregular fragments, and the natural striation is more or less replaced, first, by an almost homogeneous appearance, and afterwards by an appearance of aggregated granules."* Now, although there is a difference between the striæ of the muscular fibres of animal and of organic life, yet these observations sufficiently show, that when the muscular tissue of the intestinal canal becomes the seat of inflammation, whatever may be the extent of its progress, the bowel possesses no inherent power to dilate and enlarge its calibre; but on the contrary becomes softened, and liable to break up on little force applied to it:

From these preliminary observations then, it appears, that whatever produces loss of muscular power in the intestinal canal, and arrests the descent of matters along it, is the cause of ileus, and there are two forms under which it appears, distinctly recognised on post mortem examination. 1st. When a large amount of gas is generated, and accumulates within the cavity of the bowels, producing over-distention of the muscular fibre and

* Dublin Quarterly Journal of Medical Science, No. 65—Page 170.

irregular peristaltic action; a complete obstruction takes place, which neither strong purgative medicine, nor the employment of enemas can overcome, and no remedy can prove effectual except it prevents the formation of the gas, or procures its removal, when, if the distention has not been carried too far, the bowels may gradually regain their tone, and recovery be effected. 2nd. A portion of intestine is strongly contracted —reduced to a very small calibre, preventing the farther descent of matters along the gut, and if remedies are not adopted to subdue the morbid action of the part, the disease is rendered still more complicated, by the distention of other portions of the bowels, and the constantly recurring spasmodic action, and death is the result.

But in both of these forms, inflammation may surpervene, at an early period of the disease, attacking the muscular tissue of the bowels, and accelerate the fatal event.

Under the last category we may include stricture of the gut—of not unfrequent occurrence. The diameter of the bowel is diminished at a particular point, interfering with the free descent of the matters along the canal, and the part affected goes on contracting till it may be so small as " scarcely to admit of the passage of a quill." On examination of the parts after death, the intestine immediately above the structure is found greatly distended, and sometimes gangrenous.

When inflammation commences early and with much severity during an attack of ileus, it may not only involve the muscular tissue, but extend to the peritoneum, and by the effusion of lymph, produce great agglutination of the bowels.

These preliminary observations will enable us more clearly to understand the nature and pathology of ileus as it occurs in man.

Ileus commences with severe pain and twisting in a part of the bowels, generally about the umbilicus, sometimes it extends across the abdomen, and occurs in paroxysms. There is obstinate constipation, and the patient feels sick and inclined to vomit. Pressure over the part does not increase the pain as in acute peritonitis. The pulse as first is not much affected, but afterwards may become small and frequent. If relief is not obtained vomiting commences, and may return at intervals, till stercoraceous matters are ejected from the stomach; the bowels remaining completely obstructed. The abdomen becomes swollen, hard, and tympanitic—great prostration ensues, and the patient succumbs under the disease.

A circumstance worthy of observation, is that in ileus, the severity of the pain does not depend on the mere constipation of the bowels, for during the interval of the paroxysms the patient remains comparatively

easy. But when the strong peristaltic action returns, the flatus which had been generated, on being arrested in its descent distends the walls of the intestine—stretches the muscular fibre, and then the pain amounts almost to tormina. At this moment, coils of intestine may often be distinctly felt rising through the parietes of the abdomen. And the first relief is obtained when the smallest quantity of flatus is permitted to overcome the cause of obstruction, and finds an exit from the bowels.

Ileus bears a great resemblance to hernia as regards the pain, sickness, vomiting, and obstinate constipation of the bowels; and the post mortem appearances are often not dissimilar. There may be contraction of a part of the intestine, with dilatation of the portion immediately above, on which marks of inflammation in various stages of its progress may be observed. But in other cases of ileus, post mortem examination reveals appearances entirely different. There may be no contraction discovered in any portion of the intestine, but a great and general distension existing throughout the whole. Under what circumstances, then, it has been asked, does ileus occur, and what constitutes the nature of the disease?

I. In ileus there is a class of cases where a great and general distention of the intestines exists, and no contraction can be discovered in any part of the tube. It appears that gas has been generated to a large amount within the cavity of the bowel, and in passing along the convolutions over distends the part, weakening and impairing its functions, and when inflammation sets in attacking the muscular tissues, its contractile power becomes still more affected, and death is the result. This is the manner in which ileus is produced, and proves fatal in those animals to which we have referred, where a large amount of gas is generated in the stomach or intestines, and no contraction at any part of the canal can be discovered after death, and the same principle undoubtedly obtains, and the same cause operates in man. As post mortem examination reveals similar appearances, some of these cases are recorded by Dr. Abercrombie in his work on diseases of the bowels. In case LVIII a man aged forty, he says, "I saw the patient on the morning of the third day of the disease. He was then extremely exhausted; perspiration standing in drops on his forehead; extremities cold; pulse 160 and feeble; abdomen much distended and tympanitic; it was somewhat pained when pressed, but not acutely tender; some vomiting continued; bowels moved several times; stools dark, watery and scanty; every attempt was made to rally him without effect; he died early in the afternoon."

"INSPECTION.—The whole tract of the bowels, to the very extremity of the rectum, presented one continued state of great tympanitic disten-

tion, in some places they were tinged of a deep red color; in others of a livid or leaden color, but without any change in their structure."

He informs us in case LX, "that a man aged sixty, while perspiring profusely, drank two quarts of cold beer; and during the following night he was attacked with severe pain and sudden distention of the abdomen, accompanied with a loud noise in the right hypochondriac region. On the next day the symptoms continued unabated, with the addition of vomiting, and various purgative medicines were given without effect, being almost immediately rejected. On the third day an enema produced several copious bloody stools. It was repeated on the 4th when it brought off only blood without any appearance of feculent matter. On the 5th no relief—on the 6th day of the disease, his strength was still more exhausted, without any change in his other symptoms, and he died early in the evening.

"INSPECTION.—The small intestines were much distended and were filled with a fluid of a yellow color, similar to that which had been vomited. They were externally much injected with some adhesions. In their substance they were easily torn, giving way even when gently handled. The lower end of the ileum and the caput coli were of a deep red or of a port wine color. The great intestines contained chiefly gas, and a small quantity of fluid fæces, and no appearance was discovered of any contraction or obstruction, except what arose from a slight narrowing of the ileum near the ileo-colic valve. At this place there existed an ulcer which extended quite round the circumference of its inner surface, and was about an inch in breadth. It had gangrenous edges and the bottom of it seemed to be bounded only by the peritoneum, the mucous and muscular coats being destroyed. The man had enjoyed perfect health up to the period of the attack."

These cases distinctly prove, that in ileus we may have great and general distention of the bowels, accompanied with inflammation of particular portions, proceeding to a fatal termination, without the existence of contraction.

And if the principles enunciated in the preceding pages of this paper be correct, the great distension was produced by the gas confined within the cavity of the bowels. 1st, If the gas had been expelled from the bowels with as great rapidity as it was formed, distention could not have taken place. 2nd. It was the over distention that weakened and impaired the muscular power, rendering the bowels incapable of performing their function. 3rd. This was still more increased by the inflammation attacking portions of the tube. 4th. Inflammation was not the cause of the distention, but commenced after it, for inflammation produces soften-

ing of the muscular tissue, rendering the part friable and liable to give way by slight force applied to it.

II. In another class of cases of ileus, a physical obstruction exists at some point of the intestinal canal, interfering with the free descent of the matters, as in stricture of the bowel—intus-susceptio or pressure of a tumour on a portion of the intestine, diminishing its area. Under all these circumstances we not merely find the diameter of the bowel contracted at the seat of obstruction, but the superior portion greatly distended. It seems to be a law in the animal economy, that when an obstacle is formed in any part of the intestinal canal, fæcal matters are not only arrested in their course, but gas is generated to a greater or less amount in that part of the tube. This takes place even in newly-born infants, when a congenital obstacle exists to the ejection of matters from the bowel as an imperforate anus.* When the obstruction is of recent occurrence, and great, that is to say diminishing the diameter much at a particular point, the distention of the part above is rapidly produced, and its contractility speedily affected. But when the obstruction is partial and the more severe attacks occur occasionally, it is surprising to what extent the dilatation of the bowel may proceed before its muscular energy is lost, or inflammation sets in, and we often observe a relative connection between the great dilatation that exists above, and the smallness to which the stricture is reduced, before the functions of the intestines are completely destroyed. A case is mentioned of a patient aged forty-one years, who for eighteen months had been liable to obstruction of the bowels, with great distension of the abdomen. A constriction of the intestine was ascertained to exist about eight inches up the rectum, and to be relieved chiefly by passing bougies, which gave vent to a large accumulation of gas; during a more severe attack than usual, this remedy also failed to give relief. The smallest sized flexible catheter could not be made to pass the point of obstruction—anodynes had no effect in mitigating his sufferings, and he sank under the disease. The abdomen after death measured more than five feet in circumference. On a post mortem inspection of the parts, whilst reflecting the walls of the abdomen, the incision having reached about half an inch above the umbilicus, there was a sudden explosive report, accompanied with the expulsion of feculent matter and gas, and an immediate subsidence of the whole abdomen to about half its original dimensions. The colon which was out of place, had been enormously distended, and was found to have given way on losing the support of the abdominal parietes, after which it measured eighteen inches

* Dublin Quarterly Journal of Medical Science, No. 67, page 205.

in circumference at its widest point, and in no place less than fifteen inches. The small intestines were also greatly enlarged, but remained *in situ*. The intestines appeared universally softened, being easily torn when handled, and giving way with the least force applied. A stricture of a scirrhous nature was found situated in the rectum, about eight inches above the anus, at which point the intestine was reduced to an inch and a half in circumference, and the tube itself was narrowed nearly to the diameter of a quill.*

In this case it will be observed that the intestines continued to perform their function though imperfectly till a short period before death, as the patient on being relieved each time that the more severe attack of obstruction occurred, continued to enjoy tolerable health during the intervals. And we cannot suppose that at this early period of the disease, inflammation had attacked the muscular tissue of the bowels, but that it was the over distention of the intestine with the accumulated gas, from which he chiefly suffered, and that during the last attack in addition to the great dilatation of the bowels, inflammation set in producing softening of the tissue, and the patient sunk under the disease.

Many cases of a similar nature may be adduced. We have seen somewhere a portion of the bowel, on being surrounded by tumour, become so reduced in diameter, that on post mortem inspection it would scarcely admit the point of the little finger. The patient had suffered from repeated attacks of obstruction, occuring at considerable intervals, and at last on a more severe attack, sunk under the disease. In all these cases, there is great distension of the bowel immediately above the strictured part, which condition accelerated the fatal result; and still more if accompanied by inflammation.

III. There is a class of cases where the patient dies with all the symptoms of ileus, as nausea, vomiting, severe pain of the bowels, occurring in paroxysms, obstinate constipation and tympanitic distension of the abdomen—and on inspection after death we find a portion of intestine much distended with gas, and exhibiting marks of inflammation, but immediately below this point the tube remaining partially patescent, and yet neither the flatus nor liquid fæces had descended along it. From which it has been supposed by some pathologists, that the dilatation was produced independently of any obstruction in the passage. But in strangulated hernia, when the omentum alone is contained in the sac, similar effects are witnessed;† the pressure or strain which the gut then sustains

* North American Medico-Chirurgical Review, March 1859, p. 309.

† Syme's Surgery, page 415.

and the perverted peristaltic action that ensues, form a complete obstacle to the descent of gas and feculent matters—act exactly like a physical obstruction. And in these cases of ileus an analogous condition of the gut obtains. A strong band of lymph may be stretched across the bowel —or the intestine may be bound to the contiguous parts by strong bands of lymph restraining its action—or there may be a twisting of a portion of the bowel upon itself. Under these circumstances, when great irritation arises in the mucous membrane of the part from acidity or other causes, strong reflex or spasmodic action is excited, and the tube is rendered impervious to the descent of matters, or of gas; and ultimately the function of the bowels destroyed. Several cases of this kind are mentioned by Dr. Abercrombie—where the patient died with all the symptoms of obstruction of the bowels, and on post mortem inspection a portion of the intestines was found much distended with gas and feculent matters; but immediately below this the tube remaining partially patescent. But in all these cases there had been effusion of lymph producing agglutination of the parts, or otherwise restraining the action of the bowel, and when irritation was excited, the strain or pressure put upon this portion of the tube, produced complete occlusion—acted like a physical obstruction. And every practical physician must know, in this condition of the viscera, how easily irritation is excited, and obstruction of the bowels produced. We lately visited a patient aged thirty-six, who has been for several years affected with what appears constriction of the bowel,—is liable to severe griping pains, and flatulent distention of the abdomen—bowels generally constipated—stools hard, scybalous and scanty—and when a fuller evacuation is obtained, the diameter always smaller than natural. On this occasion he complained of severe pain situated a little below and to the left of the umbilicus, which occurred in paroxysms, drawing him together, as he termed it. Pressure continued over the part slightly increased the pain. His bowels had remained obstinately shut for three days—abdomen considerably distended, and flatus could not pass. We ordered antacids with slight antispasmodics, and the employment of enemas. And in a few hours his symptoms were relieved, the flatulent distention of the abdomen had diminished—flatus passed along the bowel, and during the night an evacuation was obtained. We mention this case to shew, that though the gut may remain considerably patescent, yet how easily irritation is excited, and obstruction of the bowel produced—the patient being liable to these attacks.

We are well aware that cases have occurred where an artificial opening having been made into the gut, above the point of obstruction, to allow the escape of the fæcal matters, no relief was afforded to the patient,

as the contents of the bowel did not descend. But the reason obviously is, that that portion of the gut had lost its contractility from over-distention. For in other cases of artificial ileus, the functions of the bowels have been restored, and the patient's life prolonged.

*To be continued.*

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*Paraplegia from Traumatic Myelitis.* Reported by W. WOOD SQUIRE, A.M., M.D., C.M., Montreal.

John Lynch, æt. 32, a Celt, was admitted into the Montreal General Hospital, December 31st, 1862, under the care of Dr. McCallum. Patient is a laborer, strongly built, of healthy stock, good habits, and has never been seriously ill.

On Dec. 31st, 1862, he was working in the main tunnel, McGill street, Montreal, when an immense hoisting derrick, weighing, probably, over 1000 pounds, fell upon his back as he was stooping over his spade, crushing him to the earth. He became at once unconscious, and in that state was brought to hospital. On examination, Dr. McCallum found a fracture, with dislocation of the eleventh and twelfth dorsal vertebræ. The eleventh was depressed about an inch, and the twelfth was very prominent,—apparently forced out of its bed. When consciousness returned, complete anæsthesia and loss of motion were discovered in both legs, with paralysis of the bladder and rectum, and excruciating pains in the thighs. The dislocation was reduced without any obvious deformity, and splints were applied on each side of the vertebral column, when the agonising pain was quite relieved, and the anæsthesia to a great extent removed. The bladder was washed out every second day for three weeks, his bowels were kept open by gentle laxatives, and he was ordered to have the following: Infusion Uvæ Ursi, ℥ iss. Bicarbonate of Soda, gr. x, three times a day. In Feb., 1863, he came under the care of Dr. Craik. His regimen, at first antiphlogistic, had gradually become supporting and tonic. The bed-sores, which now began to form, were treated with air-cushions and pillows, the hydrostatic bed, soap plaster, and oxide of zinc. On March 5th he was seized with intercurrent erysipelas, cured rapidly by salines and tincture of iron. Stimulating applications to the spine, and the internal exhibition of citrate of iron and strychnia, were attended with marked benefit. Under Dr. Fraser, who took charge of the case in May, 1863, the same general plan of treatment was pursued until June, when the patient began to suffer from occasional rigor. Both legs were now much wasted, *the right most;*

the nates were much flattened, and there was retraction of the abdominal walls, which took a less active part in forcible expiration than natural. There was pain on pressure in the mesial line, from the navel to the symphysis, due to cystitis. A feeling of ligation was experienced around the body at the umbilicus; numbness, tingling, and formication in both legs; complete anæsthesia in the right leg, and partial anæsthesia in the left. Sensation was most rapidly restored in the left leg. Lynch failed to detect two points at the utmost limits of the æsthiometer, in the peroneal region of the right leg. The left foot is much inverted, looking like a case of talipes varus, from contraction of the tibiales ant. and post, and the long flexor of the toes. The pulse in the left popliteal artery is 100: the same in the right, *but weaker.* Temperature of the left popliteal space = 97°; of the right, = 95°: radial pulse = 92: lungs and heart sound: general functions healthy: expectant of life.

*Urine.* The urine of twenty-four hours is about 29 oz., highly alkaline, sp. gr. 1018, dark brown color, muddy, strongly ammoniacal, becoming rapidly fetid. It is full of ropy mucus, and contains a notable excess of urea, urates tinged with uro-erythrine, amorphous and triple phosphates. In August, the patient passed two phosphatic calculi each the size of a large pea, preceded by symptoms of renal irritation.

In September the patient began to fail: obstinate diarrhœa set in which defied treatment for three weeks, and was followed by constipation as rebellious. Rigors recurred at intervals of four days, with rapid and *intermittent* œdema of the right leg. 4 ozs. of port wine and two eggs to be added to his daily diet. On the night of Oct. 2nd, a sharp pain was felt in the left side and over the base of the heart, with great præcordial oppression, and a slight grazing sound. Oct. 5th. A true friction sound was distinctly heard at the margin of the mammary and axillary regions, and percussion showed limited dulness in the left infra-axillary. Pain and œdema of the legs have quite disappeared. Arrow-root and a pint of beer added to his diet table. Patient was placed at once on appropriate treatment, but without any apparent benefit. Oct. 12. He complained of hearing a ticking like a clock in his chest; and a metallic, splashing sound was heard, even at some distance from the bed, on every motion of the heart, as if it were laboring in a dense fluid. Percussion and auscultation shewed considerable displacement of the heart to the right. In the upper part of the left mammary region I heard amphoric breathing and metallic tinkling; and tubular breathing all over the left posterior wall of the chest when the patient leaned forward. When he sat up the fluid gravitated, and there was dulness below. In the left mammary the percussion note was amphoric, and dull

in the left axillary when he was on his back; but on changing his position to the right side, the note became tympanitic. With the dorsal decubitus, œgophony could be heard in the left axillary. Succussion shewed a distinct splash. No cough or expectoration attended the empyema. The left intercostal spaces were on a level with the ribs; and on Oct. 13th they bulged considerably.

Oct. 14th. *Sectio cadaveris*, eight hours after death. By the courteous permission of Dr. Wright I made an autopsy.

The body was warm, though kept in a cold room. The gluteal region and the legs were very much wasted.

*Head.* Noticed some very large pacchionian bodies, one of which had produced very considerable absorption of the skull. Slight injection of dura mater over anterior portion of longitudinal sinus. Rest of the membranes healthy. Brain quite normal. About 3 ss. of fluid was found in each lateral ventricle: other ventricles healthy: choroid plexus studded with hydatids.

*Thorax.* Pleura strongly adherent both to left lung and ribs. Many recent trabeculæ were seen. Several fibrous growths of late origin hung loosely in the pericardium. An immense cavity, large enough to hold an orange, was found in the upper lobe of the left lung, communicating with the pleura and with several of the larger bronchi. On passing a catheter through the trachea, and steadily inflating the lung, the peculiar sound was elicited, of air passing through a dense fluid. About six pints of very offensive fluid, like pea-soup in color and consistency, and with curdy flakes of lymph floating freely in it, were taken from the left pleural cavity. The greater portion of the upper lobe of the left lung was covered with a thick lymphy exudation. It was partially collapsed about the apex, like an atelectased lung, and showed puckering at the lower margin. In general, it was crepitant, but around the cavity it was very dense and impervious to air.

The right lung was crepitant all over, and floated in water. Both lungs betrayed the presence of some suspicious carbonaceous spots. They were placed under the microscope, which discovered only pigment granules, without a trace of tubercular origin. The pericardium, too, was full of fluid; and the heart, which was unusually small but healthy, was thrown quite under the sternum, encroaching on the right lung.

*Spinal cord.* On exposing the spinal cavity, the pia mater was seen to be much injected through its whole length. In other respects, the cord, with its meninges, and the thecæ vertebrales, *above the eleventh dorsal*, seemed normal; but, at the seat of injury, the membranes were strongly adherent to the cord and to the canal. There was also a quan-

tity of serous fluid prisoned about the cord at the point of fracture; and evidence was afforded of an old lymphy exudation which had been partially absorbed. The posterior roots were softer and more easily torn than the anterior roots. The posterior wall of the long canal at the eleventh dorsal was fractured; and a ridge of exostosis was found there which must have pressed upon and irritated the cord. The cord was thrown over to the right, and an abrupt lateral curvature was formed at that point. The anterior wall of the canal shewed tilting of the vertebræ forward on their opposed surfaces, producing a palpable prominence; this, with a similar condition of the left wall, must have caused great pressure.

*Microscopic examination.* There was no evidence of softening to the touch or the eye; nor was any flocculent appearance produced by a fine stream of water falling upon the cord from a height. A section from the site of injury was placed under the microscope, when I saw a few fragments of nerve-tubes,—straight and varicose tubuli crammed with granular matter,—and one well-marked fragment where the double line and the white substance of Schwann were distinctly seen. Quantities of nerve cells, granules, and granule cells, were under view, with several oil globules of high refractive power. Nothing abnormal was detected in the rest of the cord.

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*Case of Puerperal Convulsions occurring during labor recovery.* By EDWARD H. TRENHOLME, M.D.

At 4 a.m., on the morning of the 12th September, I was called to see a Mrs. H., of this city, in her first confinement. About three weeks before this time, as she was passing across a street after dark, she was suddenly grasped round the waist by an unobserved person, in time to prevent her from falling into a deep ditch. She was much agitated by this double fright, although no bad symptoms resulted from it, nor yet in consequence of a fall down several steps of a stairs a week later.

She is a healthy, well-developed woman, and with unexceptional family history. The woman had been in labor twelve hours, but the pains had been slight and unfrequent; and within the last hour she had had three attacks of convulsions, from the last of which she was just recovering on my entering the room. At five o'clock she had another fit, when I bled her to the extent of twenty ounces, and gave her twelve grains of calomel. After this the pains returned, and before six o'clock, when she had another fit, I had assisted nature in dilating the os from the size of an English shilling to that of a halfpenny. Between six and seven o'clock I succeeded in dilating the os to a size sufficiently large to

admit three fingers of my left-hand. At seven o'clock she had another attack, and as I deemed the space sufficient to allow of the successful introduction of the forceps, I applied them with little difficulty, but could not effect the delivery then without danger to the soft parts of the mother, as I had no assistant to administer chloroform, and those in the house were not able to prevent her from violently tossing about the bed. I therefore removed the instruments, after which she was quiet and had little snatches of sleep up to half-past one, when she had another fit. At two o'clock she had another attack, when, at the request of her husband, Dr. Hingston was sent for to meet me in consultation. After we had talked the matter over, it was decided that immediate instrumental delivery promised the most hopeful issue.

At half-past two, while recovering from another fit, and partly unconscious from the mingled effect of the convulsions and chloroform administered by Dr. H., I once more applied the forceps, and delivered her of a full grown child after some difficulty, as the os had not dilated since morning.

After the birth of the child, as the patient was much exhausted and disposed to lie quiet, she was allowed to remain undisturbed, with the placenta unremoved, till a quarter to four, when, upon the supervention of the after-pains, she had another attack. Deeming the retention of the placenta the last exciting cause of the convulsions, I effected its removal at once with but little difficulty. After this she had no more fits. During the greater part of the afternoon she was kept partially under the influence of chloroform.

In the evening the medicine operated freely; had also passed a quantity of urine without difficulty. As she was much exhausted, she was ordered beef-tea and wine in small quantities.

On the 13th found her very weak; pulse 140; general surface cool. Says she feels bruised all over. Ordered her brandy and water, also bottles of hot water to arm-pits and feet. During the afternoon she rallied, and when I saw her in the evening there was a good deal of fever present. Surface hot and dry; tongue slightly furred; pulse 150. Complains of great abdominal pains, especially over the uterus. Ordered hot turpentine epithems to abdomen till pain is relieved, and then to apply cotton wool and flannel; also to have a grain and a half of opium every six hours. Lochia flowing freely.

14th. A little easier. No special pains over the abdomen on pressure. Fever high; countenance anxious and sallow; pulse 160. Ordered the breasts to be well emptied, and the following prescription instead of the last: Muriate of morphia, three-quarters of a grain every six hours;

also tincture of aconite (Fleming's) two minims every two hours. Lochia unabated.

15th. Much better this morning, and took some tea and toast with relish. Bowels and bladder act freely; pulse 130; lochia natural. In the evening not so well; very drowsy; respirations low, labored, and sighing, twelve to the minute; pulse 120; morphia discontinued.

16th and 17th. Improving. Pulse 120.

18th. Not so well. Great abdominal pain and slight meteorism; bowels very relaxed. Ordered the hot turpentine epithems to be repeated, and the following mixture: Sulphate of zinc, ten grains; dilute sulphuric acid, one drachm; solution muriate of morphia, a drachm and a half; water, three ounces. Two teaspoonfuls of this every six hours.

19th. Much improved, and since then has gradually recovered, so that by the end of the month,—not two weeks from her confinement,—she was able to walk about her room.

*Remarks.*—As the urine was not tested, I cannot say positively that uremic contamination of the blood was not present, although the swelled feet, &c., which usually accompany such a condition, were absent. But I would submit whether the nervous shocks she had received may not probably have caused such a change in the condition of the reflex nerve centres, as to render them sufficiently sensitive to the exciting cause, to induce the convulsions, apart from any blood contamination or venous congestion.

The exciting cause of the convulsions in this case was evidently due to the irritation produced by the uterine efforts to dilate an unyielding os; as the fits were not present during the quiescent state of the uterus, and were not permanently relieved till its entire contents were expelled.

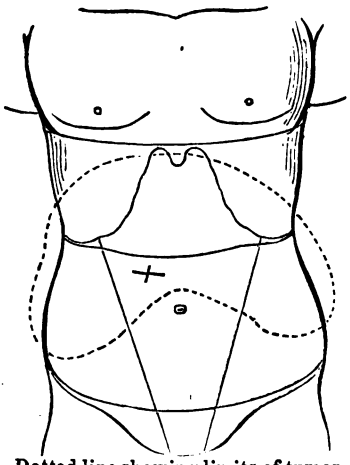
In such cases as the above, the most hopeful and successful course to pursue is to effect delivery as soon as possible; and that this can be done when the os is but partially dilated is demonstrated by this case where the extent of dilatation was barely sufficient to admit the blades of the forceps.

## HOSPITAL REPORTS.

*Montreal General Hospital. Case of Melanotic Cancer, under the care of* W. E. Scott, M.D., Prof. Anatomy, McGill College. *Reported by* Mr. M. R. Meigs.

Julia Leonard, aged forty, was admitted into Montreal General Hospital, Sept. 5th, 1864, under the care of Dr. Scott. She has a tumor

projecting from the epigastric region, extending on either into the hypochondriac. It has a firm, hard feel, and presents a knotted surface, with quite a large sulcus a few inches above and to the right of the navel. Its margin can be distinctly traced, extending from the lower part of right lumbar region obliquely upwards to a point one inch above the umbilicus; thence downwards to lower part of left lumbar region. The abdomen is greatly distended, measuring thirty-six inches in its greatest circumference. There is dulness on percussion over the whole of the upper part of the abdomen, extending as far back as the vertebral column; in the lower part there is evident fluctuation. There is a slight cough but no dyspnœa. She sleeps ill, and is greatly emaciated; complains of great weakness, and has considerable œdema of the lower extremities. Pulse 108, weak and regular; respiration easy and regular; percussion elicits dulness over the anterior portion of the lower half of both lungs; and auscultation elicits muco-crepitant râles in the same region. The intercostal spaces are much contracted from the upward pressure of the tumor. The complexion is sallow, but conjunctiva clear. The tongue is covered by a dirty, white fur, deepening at the centre to a yellowish brown. There is great thirst and little appetite; large quantities of food distending the stomach; and lately she has been troubled with vomiting soon after eating. The bowels are very costive and are moved only by the administration of purgatives. She reports her urine to be scanty and high-colored. She thinks the present attack began on the eighteenth of May last, when she first perceived the tumor; her attention being attracted to it by pain over the liver, accompanied by a swelling in the epigastrium, with œdema of the lower extremities. It has rapidly increased to its present size, accompanied by the emaciation and costiveness above mentioned. She says that she has been troubled by costiveness for the last eight or ten years, always requiring medicine to procure evacuations, and, as she says, has never had the jaundice. She has frequently applied as an out-patient, and was admitted in July, and received several enemas of turpentine and castor oil which afforded her some relief. She was discharged in August, at her own request, with



Dotted line showing limits of tumor.
Cross showing position of sulcus.

symptoms somewhat ameliorated, but again applied for admission on the fifth of September, with symptoms much aggravated. She is married, and has borne one child; has always enjoyed tolerable health with the exception of constipation, and, as she says, has suffered from wind on the stomach, and a bitter taste in the mouth.

About a year ago she lost the sight of her left eye, which she attributes to rheumatism. The remaining structures are quite prominent, bulging out somewhat and presenting a nodulated appearance, as if some deposit had taken place in the tissue. The right mamma also presents several indurated masses about the size of walnuts, quite hard and firm but free from pain.

### Progress of the Case.

The only treatment adopted was calculated to relieve the pain and irritable condition of the stomach with an occasional laxative. The poor woman grew rapidly worse, and died from exhaustion on the 17th Sept. Sectio cadaveris ten hours after death. The body is much emaciated and presents a well-marked jaundiced hue. The abdomen is greatly distended, and percussion elicits well-marked dulness over the upper part, but the lower part gives evident signs of a large accumulation of fluid, which on section of the abdominal parietes was found to be serum of a yellow color. On opening into the cavity of the abdomen the cause of the distension was found to consist of an enormously enlarged liver which occupied the whole of the right hypochondriac region, extending across the epigastric into the left hypochondrium. Downwards it extended into the umbilical region to within an inch of the navel, and on either side into the lumbar region to within an inch and a half of the crest of the ilium. Upwards it encroached somewhat upon the cavity of the thorax, pressing the diaphragm upwards. There were no adhesions except to the diaphragm, and these were slight and of recent date. It measured thirteen inches in its transverse diameter antero-posteriorly, twelve and a half through the right lobe, and nine and a half through the left; at the upper part of the right lobe it measured seven inches in thickness, and three and one fourth in thickness in the left lobe. It weighed fifteen and one-sixteenth pounds. Its surface was studded with nodules varying in size from a walnut to that of a hen's egg, and of the color of a ripe blue grape, some being quite prominent and rounded, and others presenting a depression at their apices much resembling the appearance of Farr's tubercle. To the feel some were soft and fluctuating, others quite firm and elastic. On the surface of the right lobe near its margin there was a depression corresponding to the sulcus felt during life. The

substance of the liver between these tumors appeared natural; the gall bladder somewhat enlarged and partially filled with bile. The tumors contained a dark colored matter varying in consistence from that of a thin liquid to that of the yolk of a hard boiled egg. Under the microscope was discovered large numbers of fusiform caudate, and elongated cancer cells, with free nuclei, and fat globules and also compound cells interspersed with granules of pigment, the proportion of pigment matter however being quite small. The stomach was healthy in structure, but was considerably diminished in size from the pressure of the tumor. The intestines were pressed downwards and backwards but appeared healthy. The mesentery was studded with a pigmentary deposit varying in size from that of a pinhead to that of a large pea. The mesenteric glands were also the seat of an abundant deposit. The kidneys were normal in size; the capsules were easily detached; there was some evidence of fatty degeneration; in both however there was an abundant melanotic deposit. The pancreas also contained a large amount of the same deposit, but in other respects was quite normal. The spleen was firm and much contracted weighing five ounces and containing a slight deposit of melanotic matter. The lungs were full of the same deposit, especially at their apices; the lower lobe of the right was somewhat congested. The heart was quite healthy in structure, but under the cardiac layer of pericardium there was an effusion of serum presenting a yellow gelatinous appearance. The uterus was quite normal in structure, but its serous covering was the seat of an abundant melanotic deposit, while both ovaries, especially the right, were filled with the same deposit, as were also the layers of the broad ligaments. The left eye was also the seat of an abundant deposit of the same nature. The head was not examined.

## CORRESPONDENCE.

*To the Editors of the Canada Medical Journal.*

GENTLEMEN,—The "Journal" continues to improve steadily with age. I have been much pleased with the last number—now open before me at page 174—and not least with that very sensible and practical review of Hodge's work on the obstetric art. I agree fully and entirely with the reviewer in his eulogium—I agree with the reviewer in prefering Naegle's *five* to Baudelocque's *twenty-seven* presentations—I agree with the reviewer in his many other practical observations in the article in question; but I agree with the author, and not with the reviewer in his (the author's) endorsation of Baudelocque's opinion, that pelvic

presentations and all their varieties belong to the Eutocia or unaided labors. To the practitioner who has an acquaintance with the art which the reviewer—judging from his remarks—evidently possesses, the matter is of small importance; but to the juvenile and inexperienced practitioner, who is afraid of taking steps in any direction without his Churchill or his Ramsbotham, or some riper medical friend to guide him, the classification is of the first importance. Let but the young practitioner be impressed with the idea that, as the reviewer has it, in breech cases "as a general rule, if left to nature, ninety-nine out of every hundred would result fatally to the child," and he will not be slow to employ all the artificial means possible to avert such a calamity. But are the chances, as a general rule, improved by interference? We believe not. The breech presentation continues a breech presentation to the end, or is converted (a very questionable proceeding) into a footling. In the first case, the child is exposed to some risk from the manipulations of the accoucheur, the body is gradually drawn down—and *then* begins the difficulty. The uterus does not contract with the steadiness and firmness it would have done had the expulsive powers of that organ alone sufficed to accomplish delivery. The danger to the cord *only begins* after the body is expelled. It is then, and then only, interference is called for, or indeed justifiable, unless under circumstances of severe and protracted labor. But if, as some recommend, the presentation is changed to a footling, what then? Every circumstance is changed for the worse. The mother, 'tis true, may not suffer so much—but the danger to the child is increased tenfold. The cord is exposed to almost certain pressure. And is the danger to the mother not also increased? If traction is resorted to at all the danger *is* increased, and increased immeasurably if the breach is made a footling presentation. Breech presentations have fallen to my lot not unfrequently. To compensate for the *unusual* condition, I have been in the habit of leaving most of the cases to themselves, but should the body not make that *steady* progress which one might expect—then and then only the gentlest, most delicate coaxing, so to speak, with the index finger in the groin or brim of the pelvis is resorted to to facilitate delivery. Rarely indeed has ever this interference been necessary, and more rarely still has all avoidance of manual interference been followed by untoward circumstances either to mother or to child.*

* I speak here only of non-interference during the continuance of the body of the child within that of the mother. When the body is expelled, no time should be lost in introducing the finger into the mouth, depressing the chin, and thereby effecting delivery.

I have encroached upon your space with the sole object in view of re-echoing Baudelocque's opinion—an opinion which I am glad to find is shared in by Hodge,—that "ordinarily the mother is adequate to her own delivery," and of giving expression to my own, that although many attentions may be demanded to *facilitate* the natural modes of delivery, yet that any decided *interference* is usually uncalled for.

I am, yours sincerely, MEDICUS.

Very little is needed on our part in reply to Medicus, as he appears to agree perfectly with us in the remarks we made in the review in question. We do not even advocate "the gentlest, most delicate coaxing so to speak with the index finger in the groin or brim of the pelvis." Breech presentations when not primiparіæ, rarely, if ever require aid until after the birth of the body of the child, but when that is effected we think that unless the head is speedily delivered, the delay would result in rapid death to the child. Dr. Hodge in his work advises leaving the delivery of the head to nature unaided. At page 200 he says: "The head being in the pelvis, the practitioner should never forget that the uterine contractions can have no influence over its propulsion, and that the completion of the delivery must depend on the voluntary exertions of the mother. Hence she should be strongly encouraged to increase her bearing down efforts, while the practitioner, carrying the body of the child in front of the symphisis pubis, should place the fingers of his left hand on the perineum in front of the coccyx, so as not only to support the perineum, but through it, to increase the disposition to flexion by pressure on the top of the os frontis which will now be found resting on the posterior wall of the vagina." Tis true the author fully recognizes this as a most critical period as regards the child's life, and recommends the novel method of acting on the child's head through the rectum of the mother. For our own part we prefer the old fashioned way of the finger in the mouth of the child, or what is better, especially when the parts are rigid, and the child's head large, that of slipping on a pair of short forceps and delivering at once, we cannot see the object of delay, and are convinced that it is the period of greatest possible danger to the life of the child. Nothing can be more pernicious than meddlesome midwifery; but to fairly represent how to act and when, becomes the duty of the teacher of the obstetric art.—EDS.

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*To the Editors of the Canada Medical Journal.*

GENTLEMEN,—Pray say a word to the Governors of the Montreal General Hospital, that they may be induced so to alter the operating theatre, that students may have some chance of seeing the operations. As it is now, it is impossible. SEVERAL MEDICAL STUDENTS.

# REVIEWS AND NOTICES OF BOOKS.

*The Pathology and Treatment of Venereal Diseases.* By FREEMAN J. BUMSTEAD, M.D. Second Edition. Philadelphia: Blanchard & Lea; Montreal: Dawson Brothers.

It was in 1861, that Dr. Bumstead first introduced to the profession his able work on Venereal Diseases, which, containing many new and strange ideas, met with a somewhat cold reception from a class of practitioners, ever slow to receive that which goes to contradict the views, which they have held as correct and orthodox, for many years. An investigation of the subject has clearly shown the wisdom of Dr. Bumstead's deductions; and now that the demand has brought out a second edition, we congratulate our author upon the recognition which his labors have received during the past three years. He has established for himself, not only on this continent but in Europe, a reputation as an authority on the subject of venereal diseases, and his book has received the highest commendation from all the medical journals of the Old World.

The division of labor, so to speak, in investigating diseases, for which the last few years especially has been remarkable, has done not a little to advance the science of medicine as a whole. Each investigator has added his quota to the common stock; and perhaps in no department has there been a greater improvement, than in the pathology and treatment of venereal complaints. The most interesting is the enunciation of the distinct character of chancroid and syphilis, and the fact that syphilis pursues the same course, whether derived from a primary or secondary symptom, commencing in each with a chancre at the point the virus enters the system. The work opens with an ably written chapter on that most common affection, gonorrhœa. He strongly recommends the abortive treatment, should the cases come early under observation (which they seldom do). Our experience is certainly not as great as Dr. Bumstead's, but such as it has been, it is most decidely against the adoption of such treatment. We have but rarely seen it effectual, and in three-fourths of the cases, its use has been followed by violent attacks of orchitis, the subsequent return of the discharge, being more difficult of management, and in many cases ending in an obstinate gleet. We are glad to notice that our author takes strong ground regarding the occurrence of gonorrhœa, independent of contagion. Upon this point we think few will disagree with him, whose experience in this class of diseases, has been at all large. We have had several cases where a most obstinate

discharge has followed coitus, at the time of the menstrual discharge. He says:

"Most cases of gonorrhœa from leucorrhœa or the menstrual fluid, present no characteristic symptoms by which they can be distinguished from those originating in contagion. The contrary is frequently asserted, and it is said that the former class may be recognized by the mildness of the symptoms, the short duration of the disease, and the absence of contagious properties. I am familiar with the slight urethral discharge unattended by symptoms of acute inflammation, and disappearing spontaneously in a few days, which sometimes follows intercourse with women affected with leucorrhœa; but such instances are far less frequent than those in which the disease is equally as persistent and as exposed to complications as any case of gonorrhœa from contagion. Some of the most obstinate cases of urethritis I have ever met with have been of leucorrhœal origin, and have terminated in gleet of many months' duration. Diday has even set apart those cases of urethritis which originate in the menstrual fluid as constituting a distinct class, characterized by their greater persistency and obstinacy under treatment than cases of gonorrhœa from contagion. Those who maintain the non-contagious character of urethral discharges of leucorrhœal origin have failed to adduce the slightest proof in favor of their assumption; and it may safely be asserted that none of them would venture to make a practical application of their principles."

For the third stage of gonorrhœa, Dr. Bumstead states he has found sulphate of zinc to the strength of twelve grains to four ounces of water most useful. In the first edition of the work he stated his aversion to the use of Holt's dilator in the cure of strictures—the "immediate plan," as it is termed. He has now changed his opinion, and says, "I have tested Mr. Holt's method in three cases of stricture with the most satisfactory results, and so far as I am able to judge from this small experience I am led to indulge the most favorable opinion of its value." The third portion of the work is devoted to syphilis, and a more thorough compilation of the subject we do not know. It is concisely written, the details of the different forms of syphilis, being all that an ardent student of this class of diseases could wish. The most noticeable alterations in the second edition are thus mentioned in the author's preface.

"The most noticeable change in the present edition will be found in the division of the work. From a certain deference to the opinions at that time generally received, the chancroid and its complications were, in the first edition, discussed in connection with syphilis. They have

now been assigned, as is their due, to separate portions of the work. This change has necessitated a complete reconstruction of the second part of the first edition, and its division into two—a change which, it is hoped, will impress still more strongly upon the mind of the student the distinct nature of the two diseases referred to. The same object has been had in view in abandoning the terms "soft," "hard," "simple," and "infecting chancre"; and in applying, in accordance with logical accuracy, the term *chancre* exclusively to the initial lesion of syphilis, and that of *chancroid* to the contagious ulcer of the genitals. The practical portion of the work has also undergone important alterations on various topics, among which may be mentioned the treatment of stricture by the "immediate plan" of Mr. Holt; the abandonment of specific remedies in most cases of initial lesion of syphilis; the preference given to the external rather than the internal use of mercury in secondary and tertiary syphilis; and the necessity of trusting to nature, aided by hygienic influences, and not to treatment indefinitely prolonged after the disappearance of all syphilitic manifestations, to eliminate the virus from the system. Numerous emendations and additions of a minor character have been made; every portion of the work has been carefully revised; a number of chapters have been rewritten; several new illustrations have been added; and no effort has been spared to render the present edition a complete treatise upon the subject of venereal, thoroughly on a level with the most advanced state of our knowledge."

To the practitioner who has a practice in this particular department of our art, we would say that he is not in a position to do his patients that justice they deserve, without a careful study of Dr. Bumstead's work.

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*The Principles and Practice of Obstetrics.* By GUNNING S. BEDFORD, A.M., M.D., Professor of Obstetrics, The Diseases of Women and Children, and Clinical Obstetrics, in the University of New York, &c., &c. Illustrated by four colored lithographic plates, and ninety-nine wood engravings. Third Edition. Carefully revised and enlarged. Royal 8vo. pp. 743. New York: William Wood & Co., 1863. From the author.

This truly practical work ran through three editions in the space of some fourteen months; a fact of itself sufficient to indicate the high appreciation in which the author is held by the American public. We learn that this work has been adopted as the text book in some twelve or more medical colleges in the United States. From its easy flowing

style, and clear enunciation of every topic connected with the science of obstetrics, we have little doubt that Dr. Bedford's lectures will become very attractive to the student and practitioner. We are aware that in our own University it is used by many of the students, although it does not appear in the list of works recommended as text books.

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*A Treatise on Pharmacy*, designed as a text book for the Student, and as a guide for the Physician and Pharmaceutist, containing officinal and many unofficinal preparations. By EDWARD PARRISH, graduate in Pharmacy. R. 8vo. Third Edition, pp. 850. Philadelphia: Blanchard and Lea, 1864.

We have examined this large volume with a good deal of care, and find that the author has completely exhausted the subject upon which he treats; a more complete work, we think, it would be impossible to find. The volume opens with a description of the furniture and the various implements, which are necessary to the dispensing office or shop, a chapter so full of useful hints that we cordially recommend its perusal by all pharmaceutical students; then follows a chapter on the pharmacopœia of the United States; giving a history of its adoption, and a brief glance at the additions and improvements made in the revised edition of 1863. From the author's remarks we would almost imagine that many "cooling summer beverages," of which our neighbors as well as ourselves perhaps, use not a little, have been made officinal preparations—soda powders and seidlitz powders have. Chapter three is directed to weights and measures and specific gravity, while the greater part of the remainder of the book is devoted to practical pharmacy, of which the work is a thorough exposition. At the end a chapter is added concerning prescriptions sent to druggists to be made up which is worthy of attentive perusal, especially that now-a-days so few physicians are dispensing their own medicines. It is a somewhat singular fact that but few graduates in medicine are at the time of graduation able to write what would be called even a decently-written prescription; a glance at the prescriptions on fyle at any drug-store in the province doing a dispensing business will amply confirm our statement. This is a matter which is deserving of attention; and we think the Medical School, which will first undertake the drilling of its students into the art of writing prescriptions, will be doing not a little to elevate the social position of its graduates, and giving them instruction for which they certainly cannot be too grateful. Returning from this digression, the chapter we have alluded to is well written, and contains

many valuable hints concerning the writing of prescriptions. The author strongly depreciates their being written in pencil, and advises the physician always to carry clean paper with him. We are sure we know some drug stores even in our own city, to whom the adoption of this suggestion would be a great boon. Space will not permit our saying more. To the student of pharmacy the work is indispensable; indeed, so far as we know is the only one of its kind in existence, and even to the physician or medical student who can spare five dollars to purchase it, we feel sure the practical information he will obtain will more than compensate him for the outlay. It is illustrated by two hundred and thirty-eight wood engravings.

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*The Physician's Visiting List, Diary, and Book of Engagements for* 1865.

This little volume, so indispensable to every physician and surgeon, has been kindly forwarded to us by the publishers, Lindsay and Blakiston, of Philadelphia. We feel sure that no one who has once made use of this Visiting List would be without it for double what is charged for it. From personal experience we cordially recommend it to our readers. It is arranged for 25, 50, and 100 patients weekly, the former being sold at $1.25, the second at $1.50, and the latter at $2.25. Dawson Brothers have it for sale.

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## PERISCOPIC DEPARTMENT.

### Surgery.

#### ABSORPTION OF DEAD BONE.

Dr. W. S. Savory read a paper (Feb. 23, 1864) before the Royal Medical and Chirurgical Society. The question, he stated, whether dead bone can be absorbed, still awaits a satisfactory answer. For while careful and accurate experiments have furnished only negative results, there are unquestionable facts which compel us to admit the possibility of the occurrence. One all important consideration seems to have been hitherto neglected in the inquiry—the influence of pressure in determining the result. Thus, in the experiments which have been performed on the subject, and which have naturally led to the conclusion that dead bone may be kept amidst living tissues for weeks or months without losing the merest fraction of its weight—in these experiments the dead bone was kept in simple contact only with the living parts. It appears that no considerable pressure was maintained. Whereas when ivory pegs are

driven into bone, extreme pressure is of course produced. In order to test this view, some experiments were performed, which are related in the paper. It appeared to the author that the only explanation which can be offered of the result of these several experiments is, that the absorption of dead bone, when in contact with living bone, is determined by the pressure to which it is subjected.

Mr. Hilton said the profession ought to feel obliged to Mr. Savory for having adduced by well-considered and well-arranged experiments such conclusive evidence of the absorption of dead bone by the surrounding tissues—a fact not usually admitted by surgeons. He (Mr. Hilton) had several times noticed, on looking at two ivory pegs which had been employed in the same case of ununited fracture, and apparently under the same conditions, that the surface of one of them was partially absorbed, whilst the other did not manifest any loss of substance—a difference hitherto inexplicable, but now elucidated by the author's paper, as depending upon the variable pressure to which they had been subjected. An interesting point, however, presented inself for consideration to which the author had not made any reference—viz., What was the amount and duration of pressure required to induce this absorption? for dead bone was often seen buried within granulations which were undoubtedly capable of exerting much pressure without the slightest appearance of any absorption having occurred. For instance, in the case of an amputation through the femur, the same end of the bone may come away necrotic after several months' subjection to the pressure of muscles, fascia, granulations, bandaging, and strapping, yet the track of the teeth of the saw used at the amputation would be seen as cleanly cut and as sharply defined as on the day of the original operation. The same kind of facts was quite as discernible in cases of compound fracture of a long bone, where the fractured end of bone, although surrounded deeply by granulations and new bone during several months, would present the sharp, well-defined edge of the fracture as evidently as on the day of the accident, uninfluenced by the pressure of any of the surrounding living tissues. Mr. Hilton had removed from the leg several portions of a comminuted compound fracture of the tibia eight years after the accident and seven years after the closure of the external wound, and upon two of them the well-defined edge of the original fracture was obvious and markedly different from the serrated edge observable where the piece of bone had been separated from the lining bone by the slow process of absorption. Mr. Hilton would suggest to the author the inquiry as to how or by what combination of minute events does pressure contribute towards the absorption of the dead bone, because the pressure in his (Mr. Savory's) experiments was made equally

on both the living and dead bone. No doubt such an investigation could not be placed in better hands than Mr. Savory's.

Mr. Savory said he considered it best in the paper simply to demonstrate the fact that the absorption of dead bone is determined by the pressure to which it is subjected. In working at the matter, of course he had thought of the nature of the influence thus exercised, but he did not consider any opinion which he might have formed on the subject worth expressing. The question was not in relation to the absorption of bone, whether living or dead, but to the effect of pressure on the absorption of dead bone. With respect to the case Mr. Solly mentioned, it was not enough to show that dead portions of bone bore evidence of having been partially absorbed, it must be shown that such absorption occurred after the death of the bone, and thus independently of all pressure. Mr. Savory defended the use of the word "absorption." He had not employed the term without foreseeing the objection that might be urged against it; and so he had been careful to relate how, in some of the experiments, the wounds at once closed, and completely healed without any discharge or other means by which disintegrated fragments of bone might have escaped. Moreover, if the preparations were examined it would be seen that, in some of them, the portions of dead bone which had been removed could not have escaped, for the holes were tightly plugged by the pegs which had been driven in. With reference to the destination of the bone which disappears in disease, Mr. Savory thought that the evidence advanced to prove that this is always disintegrated and cast out, was unsatisfactory and inconclusive. Of course, in some forms of ulceration of bone, as in phagedenic ulcers of soft parts, disintegrating fragments might perish and escape; but in other less destructive forms of ulceration bone might disappear through absorption. Much had been made of the fact that the discharge from carious bone contains an unusual abundance of phosphate of lime, this being supposed to represent the dissolved osseous tissue. But while, on the one hand, this would prove too much, the proportion of bone which disappears not being equal to the quantity of phosphate of lime discharged, on the other hand, a better, a more philosophical explanation of the fact might be given. As in health each part assimilates to itself from the blood its own proper constituents, so in abnormal forms of nutritition it was reasonable to believe that the material furnished by different structures would present characters of composition more or less corresponding with those of the tissue whence it proceeded. Be this as it might, however, in some at least of the experiments described there was no means by which the portion of bone which had disappeared could have escaped externally.—*Med. Times and Gazette*, March 5, 1864.

# Medicine.

## THE HOUR OF DEATH.

Mr. Alfred Haviland, Surgeon to the Bridgewater Infirmary, read a paper, at the meeting of the British Association for the Advancement of Science, recently held at Bath, "On the Hour of Death in Acute and Chronic Disease." The author commenced by stating that the subject of the hour of death had occupied the attention of medical writers from the time of Aetius, who flourished at the Court of Constantinople in the fifth century, up to the present date, but that no practical fruit had been the result for the physician in his treatment of disease; he concluded that the time had now arrived for a thorough investigation of the facts in our possession, inasmuch as if there be any latent truth in them of importance to mankind, it is our simple duty to evoke that truth, and avail ourselves of its teaching to the practice of medicine. He remarked that the physician's duties do not cease when he has ascertained the disease of his patient, and prescribed medicine to remove it; by medicine alone the patient is not healed; he has to act upon the advice of Hippocrates, and see that those in attendance do their duty also, and in his absence watch every phase and act in the living present. But, to do so correctly, the physician must know each cause of change, and by his knowledge anticipate what may occur, lay down simple rules for the guidance of friends and nurses, and teach them how to watch each circumstance of disease; he must know the changefulness of our bodies in health; he must take due account of this changefulness when illness supervenes; he must know when all our vital functions are at their height; he must know when they are at their lowest ebb;—for this knowledge is a most necessary element of success in his combat with the enemy he is employed to encounter. Of late years the art of nursing has more than ever occupied the thoughts of physicians and the laity at large. We have had noble efforts made in the camp and at home to soothe the anguish of the wounded and diseased. The author had collected over 5,000 cases of death, with the *hour of death*, and other circumstances recorded, which he had tabulated and exhibited on a large chart, the different results being distinguished by colored diagrams. By this chart he showed that, in 1,000 cases of death in children under five years of age, the periods of the greatest mortality took place during the hours between one and eight a.m., and that an extraordinary depression took place in the succeeding hours. Between nine and twelve p.m. the rate of mortality was at its minimum. He then compared these statis-

tics with 2,891 deaths from all causes, and the chart showed how remarkably the wave lines of death compared with those above. He then compared these diagrams with deaths from consumption, which, although they showed a general resemblance in the wave line, yet between the hours of four to eight a.m., there was a depression, when compared with the first four hours period. He showed that small numbers are not sufficient for a statistical truth, and he therefore urged upon his provincial brethren to assist him in his investigation by forwarding to him data for further investigation of this interesting subject. He contended that the tables on the chart proved the extraordinary mortality in the early hours of the morning, when the powers of life were at their lowest ebb, and, strange to say, when the patient was least cared for. He urged the necessity of feeding and stimulating the patient at his weakest hour, so as to tide him over a critical period, and, even if death be inevitable, so to support the patient that he might at least have a few hours more of life snatched from eternity, to admit of his being able to carry out some neglected duty, pardon some enemy, or see some beloved friend. He finally urged upon his professional brethren the high importance of teaching friends and nurses how to attend to those under their charge. He concluded by saying that the subject itself required no apology for its introduction to the Association, however much the mode of his treating it might do so. He felt convinced that it was one which had occupied the attention of many of his hearers, when they had been watching hour by hour the fitful changes of disease in the persons of those dear to them, or of those to whom as nurses they had desired conscientiously to do their duty. To simplify this duty and to calm this solicitude at a time when either an excess of the one or an ignorant neglect of the other might be fatal, was one of the main objects of this investigation; and he felt convinced, however imperfectly he might have expressed his opinions on the subject, that it is one of deep interest not only to his Profession, but to the community at large, and that the British Association would not deem it unworthy of their consideration.

## Midwifery.

### THE DIET OF CHILD-BED.

By Graily Hewitt, M.D., Physician to the British Lying-in-Hospital; Lecturer on Midwifery and Assistant Physician-Accoucheur at St. Mary's Hospital.

Gentlemen,—The importance of the subject which I now propose to discuss—the dietary proper for a patient during the puerperal state—is,

I believe, hardly to be over estimated. The various accidents and disorders incident to the puerperal state, are as I shall endeavor to show you, very intimately dependent on conditions over which a judiciously contrived dietary exercises a marked control. The principles which guide us in the selection of remedies for those disorders are identical with those on which we rely in laying down regulations for the diet and regimen of the patient, and in the determination of this question are involved many points of vital interest in the pathology and treatment of puerperal diseases. The "diet" which is best adapted for a woman after parturition is that which will best secure her from becoming affected with the diseases incidental to that period; and no one who has witnessed the terible rapidity with which these affections not unfrequently overwhelm the unfortunate subjects of them, will be disposed to consider anything unimportant which has a bearing on their prevention.

The subject of the diet of child-bed is one which has been of late forcing itself on professional attention; and I have been long impressed with the necessity for a revision of the rules laid down in the various text-books on midwifery, relating to the diet and management of women during the puerperal state, based upon a reconsideration as to the correctness of the principles on which those rules have been constructed. On July 9th, 1863, I read a paper on this subject at the annual meeting of the South Midland Branch of the British Medical Association, held at Peterborough. In this paper, which was not at the time published, I expressed very strongly my dissent from the teaching which has been prevalent on the matter in question, and recommended the adoption of rules, as I conceived, more rational, and better adapted to the end we all have in view —namely, the preservation of the puerperal patient from sickness and disease. I have the satisfaction of being able to state that the present respected president of the Obstetrical Society, Dr. Oldham, in his address at the annual meeting of the Society in January, 1864, expressed himself on this very subject in terms almost identical with those used a few months previously by myself at Peterborough.

The text-books most generally in use are those of Dr. Churchill, Dr. Ramsbotham, and Dr. Tyler Smith. The principles laid down in these works in reference to the diet of the patient during Child-bed are to be gathered from the following quotations.

Dr. Churchill says, in reference to the diet: "Excess, by inducing feverishness, may retard the convalescence. The patient should be confined to slops—gruel, panada, arrowroot, milk, whey, weak tea, &c,— with bread or toast and butter or biscuit, for five or six days, when the excitement produced by the secretion of milk has subsided; and if there

be no counter-indication, she may take some broth, and on the seventh or eighth day some chicken or a mutton chop, with some wine-and-water." (4th edit., p. 234.)

Dr. Ramsbotham directs that nothing but tea, toast, or farinaceous food be given until the bowels are freely opened. A little beef-tea or broth is then allowed. To this, in a day or two, a light pudding is to be added; "and in a week she may be allowed a small quantity of solid meat." Stimulants of any kind are forbidden, under ordinary circumstances, until near the end of a fortnight. (p. 151.)

Dr. Tyler Smith says that no solid food should be given until after establishment of full secretion of milk and action of the bowels; but he at the same time adds that "cases sometimes occur in which the exhaustion is so great that animal food and stimulants are required from the first." (p. 319.)

From these quotations it is evident that the principle of practice recommended by these standard authorities is one of low diet from the first; Drs. Churchill and Ramsbotham ordering a low diet for as much as a week after labor has taken place; and Dr. Tyler Smith concurring in the principle of low diet as a rule, but admitting the exceptional necessity for deviation from this rule. The practice is, as I hope to show, wrong and unnatural. Nevertheless, the rules which I have mentioned to you are followed by a majority of practitioners. We have so grown up in the practice that it has hardly seemed to be extraordinary that a woman should be allowed little more than gruel, *ad nauseam*, for a week or more after her labor is over.

Why is it that it has been considered necessary to place a woman recently delivered on a low diet? It was thought that the adoption of a low diet was likely to be the means of preventing puerperal accidents and diseases. This is the principle on which these rules are based. Is this principle true? Are known facts in consonance therewith? I believe the principle to be entirely wrong; I am quite sure that facts do not bear it out—nay, that they distinctly contradict it. Let us consider for a moment what is the condition of a woman directly after delivery. The nervous system is much agitated; she is often much exhausted; her muscular system has been exercised powerfully and to an unwonted extent; she has lost a certain quantity, in many cases a considerable quantity, of blood. The rational treatment of a patient presenting such symptoms would be a restorative one; it would involve (first) rest, and if possible sleep; and (secondly) the administration of such nourishment as would replace what has been lost; and it is obvious that the patient will require food in proportion to amount of loss sustained. Further, it must

not be forgotten that in many cases the patient, although not giving any obvious external sign of weakness or prostration, is nevertheless in a state very closely approaching to one of exhaustion; and this is particularly observed where the constitution has been undermined by rapidly succeeding pregnancies in women who are insufficiently fed and badly cared for. The rational treatment then, I would repeat, is to administer food such as will restore what has been lost; and by "food" I understand whatever tends to support and maintain vital power—animal food especially, combined or not, according to circumstances, with liquid containing alcohol. So far as the condition of the patient immediately after labor is concerned, there would seem to be no reason for depriving her of such food and restoratives as would be administered under circumstances apart from the parturient state altogether, and with a view of alleviating similar symptoms.

But, it is argued, the patient must be kept on low diet in order to prevent mischief arising, and to ward off certain evils to which she is liable. A low diet will prevent, it is said, the occurrence of what is called "inflammation." Let us consider these various "inflammatory" conditions liable to arise after parturition, with a view of ascertaining how far they are likely to be prevented, or the reverse, by the adoption of a low diet.

1. *Milk Fever.*—This is usually described as an affection which comes on about the third day, when the breasts begin to swell, the pulse rises, and there is a feverish heat of the skin, these symptoms subsiding in the course of twenty-four hours, more or less. From what we read in books, we should conclude that this is a common disorder; but the fact is that it is a very rare disease indeed, so much so that an eminent authority, M. Pajot, of Paris, almost doubts the existence of the affection. As bearing on this question, I may mention that out of the last fifty cases which have been under my care in the British Lying-in Hospital there were only two in which the symptoms present had any resemblance to those of "milk fever." This disorder is, you will perceive, ephemeral; no bad effects result from it. And now an important question arises—Would this disease be observed if the patient were well fed? My own experience has led me to the conclusion that milk fever is less likely to occur when the patient is well fed than under the opposite conditions. In the two cases which I have just mentioned as observed recently by myself there was present a markedly defective state of the nutritive functions, and both patients had been, prior to their admission into the hospital, very indifferently fed. I strongly suspect that "milk fever" is in some cases connected with the practice, prevalent with some nurses, of not putting the child to the breast until one or two days after labor. This practice is

one which I believe to be highly improper, and one calculated to lead to the production of sore nipples and milk abscess. On this point, however, I do not wish to enlarge at this moment. The point to which I wish particularly to call your attention is, that it is very questionable if a low diet tends in any degree to prevent the occurrence of milk fever.

2. We come next to the more serious puerperal diseases—"*puerperal peritonitis*," *puerperal fever*, *phlegmasia dolens*, &c. With respect to the pathology of these diseases, there is very much more to be said than can be compressed into the short space now at my disposal, and I can only state those conclusions respecting them which may, as I believe, be made a satisfactory basis for the application of therapeutics. It was formerly considered, and the idea is still prevalent to a wide extent, that the essence of these serious puerperal affections was "inflammation." Thus when, two or three days after labor, the patient began to complain of shivering, of pain over the uterine region, when the pulse became frequent, these symptoms were considered to indicate the presence of inflammation of the uterus or of the peritoneum. It is now known, however, although not sufficiently generally admitted, in the first place, that these symptoms frequently indicate the passage of poisonous material into the blood, really a form of pyæmia; and, in the second place, that while mischief of an "inflammatory" kind may be set up in consequence of the introduction of such poison, or in consequence of violence sustained by the uterus during parturition, the best method of combatting the inflammation is, not by employing remedies formerly considered anti-inflammatory, such as bleeding, antimony, mercury, administration of low diet, and the like, but by supporting the strength of the patient, and by exhibition of remedies of a soothing and sustaining nature. So, again, in cases of puerperal fever: the condition actually present is a poisoning of the blood attended with symptoms of extreme depression, in the prevention and treatment of which low diet and lowering agents of whatever kind are, in my opinion, noxious and injurious in the last degree. In phlegmasia dolens, another accident of the puerperal state, the essence of the disease being erroneously considered to be "inflammation," it was supposed that a low diet would tend to prevent such inflammation. The word "inflammation" has much to answer for in respect to the injurious influences it has exercised on the treatment of puerperal diseases. It is responsible for the low-diet system which has so largely prevailed in the lying-in room —a system which, by weakening the patient, has rendered her liable to become a prey to the poisonous influences by which she may be surrounded, and has induced a mode of treating puerperal diseases calculated to neutralize and negative the efforts nature will always make to overpower and

throw out the subtle agent creating mischief within. In the prevention of puerperal fever, the first thing to do is to prevent contact with septic agencies from without; the second, to secure the patient from the operation of septic agencies within. The latter indication is best fulfilled by securing early, good, and permanent contraction of the uterus. A relaxed uterus readily becomes the medium of absorption from the inner surface of the organ through the open extremities of its torn vessels. Perfect contraction of the uterus is, I believe, an almost complete safeguard against introduction of septic matter into the system, and contraction of this kind is best maintained by keeping up the vital powers of the patient, which can only be done by taking care that she is well nourished. Defective contraction of the uterus I have invariably observed to be present at the outset of an attack of puerperal fever.

Modern pathological research has removed phlegmasia dolens from amongst the affections requiring an antiphlogistic treatment and prophylaxis. The substance which fills the hardened vein was formerly believed to be the product of inflammation, but we now know that it results simply from coagulation of the blood. The blood coagulates in the veins; the clot may soften, and become converted into a soft, puriform material, which, though looking like pus, is only broken down fibrin. Phlegmasia dolens may occur in men as well as in women who have not had children, and it is not unfrequently observed in cases of phthisis. Phthisis is, as we all know, not an inflammatory disease, its distinguishing element being defective nutritive power. It has been shown by Professor Humphry, of Cambridge, that this tendency to coagulation in the veins, apart from puerperal influences, is associated with a depressed condition of the vital powers, and he has offered abundant clinical evidence of the correctness of this statement. Now, in the case of a woman recently delivered, a depressed condition of the vital powers is very far from uncommon. If the uterus does not contract, an unusual quantity of blood remains in its vessels, and there coagulates. The coagulum spreads upwards by extension, and when it reaches the common iliac vein the circulation in the external iliac vein may become stopped at any moment. Undue loss of blood during or after parturition necessarily depresses the system, and facilitates coagulation in the uterine veins, a tendency still further increased by the circumstance that the uterus in such cases does not contract well. That phlegmasia dolens is more often observed after parturition, in cases where much blood has been lost, is a matter of observation; that it has been noticed to have occurred very frequently in cases where the vital powers have been inadequately sustained by nutritive material will become also evident to those who will take the trouble to inquire

into the matter. The evidence to be collected, pathological as well as clinical, is all in favor of the proposition that by a generous diet will the tendency to phlegmasia dolens—supposing it to exist—be likely to be counteracted.

If, for the sake of argument, we admit that these puerperal accidents are inflammatory, the utility of a low diet cannot be maintained in face of the great alteration which has come over the professional mind in reference to the treatment of inflammation. The practice of bleeding has very largely gone out; mercury and antimony are far less relied on than formerly. There is certainly much doubt as to their efficacy in these cases. The absolute dietary formerly insisted on has equally fallen into disfavor.

It may be urged that I am arguing on theoretical grounds; but I can state as the result of very careful personal observation, that the conclusions I have enumerated as to the bad effects of the low-diet system in the prevention and treatment of the puerperal diseases alluded to are amply borne out by the facts in my possession. I have also—and this is perhaps more to the point—abundant evidence of the most practical kind of the value of a generous sustaining and supporting diet and regimen, both in cutting short puerperal mischief of the worst kind, and in preventing its occurrence under circumstances most threatening to the patient. What I have seen of puerperal fever and allied disorders has, indeed, induced me to regard with the utmost horror all remedies of a depressing, lowering character. In the treatment of these affections, large quantities of food and brandy, or an equivalent, I have employed most successfully. It is rational to suppose, and it is consistent with my experience, that this gives a clue to the prophylaxis of these diseases. I say nothing of cleanliness, ventilation, separation from contagious influences, &c.; the necessity for these it must be superfluous for me to expatiate upon.

3. *Puerperal mania* is another affection here to be alluded to in connection with the subject of the diet of child-bed. It will be sufficient perhaps, for me to state in reference to this disease, that a generous diet with opium in large quantities, and absolute rest, mental and bodily, form the essential elements in the treatment. Here, also, the clue to the prophylaxis is offered by the treatment. The disease generally results from the combined action of excitement and weakness, however induced.

4. *Sudden death during the puerperal state.*—This is an occurrence rare, but of great interest, In the cases which have been investigated the accident has been found to be connected with coagulation in the veins and obstruction to the circulation produced by the coagula in question. This form of death is one of the results of what is known as "embolism." What I

have already said in reference to the circumstances which lead to coagulation within the veins after parturition will enable you to understand why it is to be expected that a low diet will favor the occurrence of this lamentable accident. Apparently the best possible preparation for such a disaster would be to keep the patient on a very low diet, to prevent all motion of the body, thus favoring stagnation of the blood in the great vessels, at the same time neglecting to take any precautions to ensure uterine contraction.

5. *Protracted convalescence.*—This is, if not a disease, certainly a great evil. That the observance of a rigidly low diet during the period of lying-in does tend to render the convalescence protracted does not admit of a doubt. This has been forcibly stated by Dr. Oldham in his address to the Obstetrical Society to which I have already alluded. "The precepts laid down in some of the midwifery books," says Dr. Oldham, "for the management of the puerperal state steadily induce a debility in the first fortnight which requires a drawling convalescence in the second fortnight to overcome.....From first to last elements of weakness and nervous disorder are introduced, and the very diseases are invited which they were designed to remove.

We have now considered *seriatim* the chief of the evils which have to be prevented or encountered during child-bed, and I think it has been rendered evident that the supposition that a system of low diet is calculated to remedy and prevent these diseases is a mistake. The actual practice of those best informed on these subjects has of late years undergone a very marked change. Dr. Oldham is not alone in his practice of supplying the puerperal patient with food of the best kind and in good quantity from the very moment of her delivery. That the time has come for the adoption, by the profession at large, of a more rational principle of treatment cannot be questioned. And now let me state that the views expressed by the illustrious Denman on the subject of the diet of child-bed are in perfect agreement with those for which I have been contending—namely, the impropriety of depriving the puerperal patient of her ordinary food; but his precepts on this point seemed to have almost entirely passed out of professional recollection. Denman says: "After seeing and considering much practice and trying various methods, not only immediately after delivery, but through the course of child-bed, I am fully persuaded that, laying aside all refined speculations, those patients will fare the best and recover most certainly and speedily by whom the least change from their former habits is made.....The general principle of making as little change as possible from their former habits and customs, either in diet or in any other respect, will best satisfy the expectations of the medical attendant." (Vol. II., p. 449.)

What I now advocate is a return to these principles of practice. With reference to the particular diet suitable in different cases it is unnecessary that I should enter into any lengthened detail. It is obvious that the quantity of food must be proportioned to the requirements of the patient; one will require meat once, another two or three times, in the day. As a general rule, Denman's advice to make little change in the ordinary diet should be followed; where, however, the labor has been severe or long, where an unusual quantity of blood has been lost, or where the constitution has been weakened by previous illness of any kind, stimulants are, in my opinion, almost imperatively required, unless the patient be able to take animal food, eggs, milk, &c., easily and in good quantity. The exhaustion produced by the labor frequently destroys for a short time the appetite for solid food, and at this period it is necessary to administer nutricious liquid food—milk, soup, beef-tea, eggs beaten up with wine or brandy (and a sufficient quantity of the latter)—in order that ground may not be lost.

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## SPONTANEOUS EVOLUTION.

Professor Murphey, of London, communicated to the Obstetrical Society of Dublin the following example of this. On the 4th of November, 1862, Dr. Scholefield Johnson was called to attend a lady in her first confinement. He arrived shortly before 10 o'clock a. m.: the pains were then good, and had been so previous to his arrival. After a very careful vaginal examination Dr. J. found the os uteri dilated somewhat larger than a crown piece, and moderately dilateable; membranes entire.

" Dr. J. diagnosed a head presentation; and, from the position of the posterior fontanelle and sagittal suture, was satisfied that it occupied the third position. No examination was again made until the liquor amnii escaped, the os being three parts dilated; and then, to Dr. J.'s astonishment, he felt the breech; the funis also descended, and gave some trouble; as the pulsations were becoming feeble, Dr. J. delivered his patient at 11·40 a. m. The child was nearly still-born, but was restored with some diffculty.

" *The child had a swelling on the upper part* of the left parietal bone, extending towards the occipital; it increased in size during the next twenty-four hours, and was larger than a pigeon's egg, and evidently contained blood. The ankle also was discolored, and slightly swollen."

Is this a case of spontaneous evolution, according to Denman's explanation?

Dr. S. Johnson, a skilful practitioner, felt the fontanelle and sutures,

so as to diagnose the position of the vertex, and made no subsequent examination until the membranes were ruptured, when he found the breech presenting. After delivery, a tumor was found on the upper part of the left parietal bone, just where it ought to be in third positions.—*Dublin Quarterly Journal of Medical Sciences.*

## Materia Medica and Chemistry.

### ELECTRICITY IN HOUSEHOLD USE.

Boston claims the birth of the philosopher who first drew electricity from the clouds: and New York, the residence of him who utilized it in the art of telegraphy; and now Philadelphia demonstrates her right to the great brotherhood of practical science, by a new and beautiful application of it to an important domestic purpose. The name of Cornelius is soon to rank with those of Franklin and Morse.

Henceforth that very useful, heretofore indispensable, generally disagreeable, and oft times dangerous little article, the lucifer match, may be dispensed with. Its days are numbered, and it may be said to have received its mortal wound by a stroke of lightning.

The improvement which elicits these remarks is called the *Electrical Bracket*, and consists of an ornamental attachment to the ordinary gas burner, by which the gas may be lighted at any moment by the instantaneous production of a spark of electricity. The means of accomplishing this is as simple as it is ingenious, and so easily operated that an infant cannot make a mistake.

The application of electricity to the ignition of the current of gas issuing from an ordinary burner is not a new thing. Many public apartments, as the Representatives' Hall at Washington, the Cooper Institute in New York, and others, having had arrangements for the simultaneous lighting of the gas gets for some years. But the apparatus there employed is the ordinary voltaic battery of cups, plates, acids, &c., requiring daily and careful attention, and sometimes failing in spite of the best supervision.

The genius of Robert Cornelius, of Philadelphia, has furnished us with an arrangement for the creation of the electric spark, entirely different and avoiding all the paraphernalia of the old method.

The means he employs is simple friction of two surfaces of suitable material, by a movement as simple and easy as the turning of a key. The apparatus consists of a brass cup of about the size and shape of an

apothecary's four ounce measuring glass, lined inside with lamb's wool and silk. Into this cup is loosely fitted a plug of hard rubber, and these furnish the surfaces whose friction produces the electric spark. The cup, supported firmly on the bracket, is connected with the gas burner by a fine copper wire covered with silk, and terminating in a platinum point one-sixteenth of an inch from the aperture of the burner; merely lifting the rubber plug from its bed in the cup suffices to produce a spark, which, darting from the platinum point to the burner, ignites the escaping gas. This little apparatus, being without any fluid or screws, or any other adjustment than is described above, cannot get out of order by ordinary usage, and is always ready for instantaneous action. To render it infallible at all seasons and temperatures has been the inventor's chief anxiety, by the use of such materials for the friction surfaces as could not fail to produce a spark in the most unfavorable weather; and judging from the daily observation of one in our own dwelling during the present summer, at times when the exceedingly damp atmosphere would, if ever, interrupt its action, we are convinced that the present arrangement needs no improvement.

This elegant addition to our household convenience, when placed before the public (as it soon will be), will command universal attention and gratification.

The same principle is applied by the inventor in other forms. We have seen five burners of a chandelier simultaneously ignited by one turn of a screw. In this case the friction surfaces have the form of flat discs of about six inches in diameter, and merely raising one from the other with a slight twisting motion, causes a spark which is communicated to each burner by a separate wire conductor at the same moment.

Another form is that of a small brass tube enclosing a movable rod or piston, which slides from end to end of the tube as the latter is turned in the hand. The friction caused by the sliding of the piston produces the spark which is communicated to the burner when the tube is brought into juxtaposition with it. By this arrangement any gas jet may be ignited without either match or torch.

This is one of the neatest inventions it has ever been our fortune to witness; and will doubtless bring to its ingenious and philosophical contriver, what he justly deserves, an ample pecuniary return.—*Philadelphia Med. and Surg. Reporter.*

# Canada Medical Journal.

MONTREAL, NOVEMBER, 1864.


## PUBLIC HEALTH.

The importance of the subject of public health is attracting very general attention at the present time. The laws which govern public health should be thoroughly studied, and become to all a subject of deep interest. That the invasion of disease and death is preventable to a certain extent is an undoubted fact, one which is daily demonstrated in the cities and larger towns of Europe. That man in the body should be rendered immortal is neither attainable nor desirable; but that he should fill out his allotted time and enjoy the blessings bestowed by an all-wise Creator is the desire of each individual. It has been aptly said by Dr. Aitkin, that "the physician must above all remember that the sphere of his professional exertion is limited, and surrounded by unsurmountable barriers, and that death will eventually come alike to all, reminding him that he himself must become a victim to the incompetency of his art." In the foregoing numbers of this journal we have touched upon some of the causes which affect the health of our city; others exist which admit of remedy if properly looked into. It is not alone sufficient that we inquire into the state of drainage of our houses; this may be regarded as of the greatest importance. The passage of the by-law that all houses shall possess efficient and thorough drainage, under penalty to the proprietors for negligence in complying with the terms of the law bearing on this point, is a step in the right direction, and we trust will be rigidly carried out. Let all premises be efficiently drained; but how is this to be enforced? Surely our city authorities will not trust to police inspection; a proper officer is needed, and should at once be appointed. An officer of health is much required in Montreal, one who, occupying a public post, would be responsible to the citizens for the due performance of a most important duty.

In all cities of any size in Europe and America, the great importance of a health officer is fully recognized; but Montreal has so far contented herself with a health committee,—a committee existing in name, but

whose acts are without result, and of the incompetency of which the chairman has complained. In London no house is permitted to be built or rather rented unless after previous inspection by the officer of health. Markets are with us unvisited, and we daily observe meat publicly exposed for sale, which in other countries would be condemned unfit for the use of man. Were there an officer of health for our city, we have little doubt that much benefit would result. It becomes a necessity forced on us by our altered circumstances. It was all very well trying to grub on without scientific advice, while we were not much larger than a good-sized village; but now the necessity has presented itself in the light of a duty, one specially conservative,—conservative of life, health, and the ordinary comforts of existence. In the last number of our journal we referred to the system of crowding buildings into unwarrantably small space: much more could be said on this point, such as the absence of sunlight, air, ventilation, and the possibility of cleanliness, besides which the absence of sufficient breathing space for the inhabitants,—all fruitful sources of disease. Sufficient breathing space is one of the most important subjects of sanatory science. During our professional career, we have entered rooms when the atmosphere was charged with the emanations from the bodies of the occupants to that degree as to render it painful for us to remain in the room longer than a few minutes: we positively could not breathe. Not long since we went in the depth of night to see a poor man, and on entering a room of certainly not over twelve feet square, we found it occupied by a family, consisting of father, mother, and six children; and, as though the atmosphere was not already foul enough, there were some six or eight sympathizing friends present, who literally filled the apartment. Such tenements are deserving of condemnation as unfit habitations. There are many houses and tenements in our city which do not possess even surface drainage; others which from their position do not admit light; and many sleeping apartments are in back cellars, to which light and air are inaccessible. In other localities cesspools give out their deadly emanations in the immediate proximity of dwellings of the most wretched class, and these again are crowded with several families. Is there any need for this, we ask, in a country like Canada, and especially in a town like Montreal? Surely there is space enough to house comfortably as many more inhabitants, as are to be found in our city. The fearful mortality especially among infants, and the apparent steady increase of disease and death is not to be wondered at. It becomes therefore a necessity, nay an imperative duty, of our city authorities to look into the subject of sanatory reform, and adopt measures for the arrest and removal of nuisances. The world

owes every man of proper principle a living; and society is in duty bound to look after the health and well being of the poorer classs. We speak warningly. It is probable that epidemic cholera may again visit the western portions of our globe, as this fearful scourge appears to be following the course it pursued in 1831, 1833, 1848, and 1853. In what an unprepared state would it find us now! Again we might expect a repetition of the scenes of 1832, when death invaded and swept off whole districts.

## HONOR TO THE BRAVE.

NOT many weeks ago, a band of twelve physicians, occupying various positions in the army stationed in Canada, left our city (under orders from the authorities) for Bermuda,—then and still the scene of fearful ravages from yellow fever. Few who bade them farewell, and who knew the fearful fatality of the epidemic they were about to encounter, ever imagined that all would pass the ordeal unscathed. Too soon has this fear been realized. Hardly had this devoted band landed upon the pestilential shores, and entered upon the discharge of their duties, than one of their number was prostrated by the disease. Poor Milroy, the active, energetic assistant surgeon of the 30th Regiment, now stationed in this garrison, was the first victim. Not long was he allowed to labor on his noble mission, ere he passed away, a victim to the disease he went so far to assist in arresting.

At last accounts the disease was raging with unabated fury, and those able were leaving the country. Who can tell upon whom the fell destroyer will pounce as his next victim? for, worn out by watching, dispirited by want of success, they are indeed apt to contract the disease. Who but will remember the fearful epidemic of yellow fever at Norfolk, Virginia, in 1855, when forty physicians fell in the hopeless contest? God grant this visitation in Bermuda may at its close give no such list. How few think of the dangers which the profession is exposed in the discharge of its duties. How few, when they heard of the departure of the twelve physicians for Bermuda, even thought of the dangers they would so soon meet; and yet they are as great as that encountered by assistant-surgeons Manley and Temple in their brave conduct at the recent engagements in New Zealand, and for which their Queen has decorated them with that badge of distinguished bravery the Victoria Cross. We cannot but admire the spirit of true heroism which is exhibited by the man who, at the call of duty, walks to almost certain death, in aid of his fellow-creatures, suffering from a malignant infectious disease; this, in our opinion, is of greater merit, than he who marches to the cannon's mouth, during

moments of intense excitement. One exhibits the cool collected determination, self-sacrificing benevolence of the Christian; the other the plucky spirit, and gallantry of a brave man,—both equally to be admired, and equally deserving of recognition. But if no outward decoration is worn on the breast of the army or civilian physician who so often breathes the pestilential air so filled with summonses of death, there is that inward satisfaction which every physician feels when he knows that he is simply doing his duty, and exerting the talents which his Creator may have given him for the benefit of his suffering fellow-creatures.

Since the above was in type we have been favored with some information from Dr. Muir, C.B., Inspector General, concerning the outbreak of the yellow fever in Bermuda, which we condense below. At the time the disease broke out, the commencement of August, there were five military medical officers stationed in Bermuda; all of these were speedily attacked, and one died (Asst. Surgeon Dodge, 2nd Reg.). Of the medical men dispatched from Canada and Halifax, seven were attacked with the disease, and three have died, viz., Staff Surgeon Clarke, from Quebec; Asst.-Surgeon Milroy, 30th Reg., from Montreal, and Asst.-Surgeon Powell, from Halifax. All the others are convalescing satisfactorily. The naval service sustained a severe loss from the death of Deputy Inspector General Gallagher, who died from the same disease. Mr. Henderson, of the Purveyor's department, who was transferred from Montreal to Bermuda, in May last, also succumbed to the same destroyer. He as well as surgeon Milroy have left many friends in Montreal. By the last official accounts received (dated October 1st), the disease was rapidly declining, and its total disappearance was speedily looked for. The medical officers therefore who could be spared, have been recalled.

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It is with the deepest regret that we have in this issue to chronicle the sudden death of our intimate friend and fellow practitioner, Thomas Walter Jones, M.D., who expired on the morning of the 28th ult. He had but recently returned from a visit to Europe and seemed much improved in health. In our December number we will furnish our readers with an obituary notice. Dr. Jones was a graduate of the University of Edinburgh.

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## TRICHINA SPIRALIS.

The disease resulting from this parasite has attracted a good deal of attention of late, especially in Germany, where a large number having been

poisoned by it after attending a celebration at which they had partaken of sausages containing the trichina. Several cases have been reported in the city of New York; and in May last a number occurred in the vicinity of Buffalo, which are published in the Medical Journal of the latter city. The symptoms of these cases were such as to lead the attending physician to believe he had acute muscular rheumatism to deal with; there was stiffness of the limbs and the whole body, œdema of the eyelids, labored respiration, great prostration, and profuse sweating. At the commencement there was diarrhœa, which soon ceased; but during its entire course there was great sleeplesness and unquenchable thirst. At the *post mortem*, abundance of trichina were found in shreds of sausages which the patient had partaken of, and in muscular fibre, taken from the thorax, abdomen, and thighs of the patient. The microscopic investigations were made by Drs. Hadley and Lothrop of Buffalo.

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## PLASTER OF PARIS SPLINTS.

One of the documents recently printed by the United States Sanitary Commission for general distribution among army surgeons, is a brochure "*On the Use of Plaster of Paris Splints in Military Surgery*," by James L. Little, M.D., late house-surgeon of the New York Hospital. Full instructions are therein given on the proper methods of preparing and applying the plaster, illustrated by six woodcuts, which render the process intelligible to all. For the transportation of the wounded this is an exceedingly valuable process, as the application may be made at any period of the injury; and the rigidity of the splints, with their easy and perfect adaptation to the contour of the limb, form a perfect protection of the injured parts. "In most cases we have recommended it only as a dressing for transportation. There are, however, many cases of compound fractures, in which this kind of splint may be used during the whole course of treatment. In fractures of the leg, in injuries involving the knee, ankle, and elbow joints; in fractures of the forearm and humerus, it can always be used with advantage. In simple fractures of these parts, where the displacement can be easily reduced, there is no better form of dressing."

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## DR. RIDGE'S PATENT FOOD.

Medical men as a general rule object to recommend any patented article to their patients. We have received a canister of the above named patent food, together with a note from Dr. Ridge, detailing its qualities

and mode of preparation. We have tried it, and found it to agree better with infants than the various amylaceous articles in use. It is prepared from the finest of wheaten flour, which is subjected for hours to a temperature of 212° Fah:—and contains a small proportion of bicarbonate of soda. In respect to its mode of preparation it is very similar to the boiled flour which is so well known and in such general use in the nursery. It is to be had at the Medical Hall of Messrs. Kenneth Campbell & Co., who are general agents for Canada.

We have to thank Messrs. Davidson & Co., Central Drug Store, for a specimen bottle of the Elixir of Peruvian bark, with protoxide of iron, prepared by J. R. Nichols & Co. of Boston.

It is inferior in flavor to the ferro-phosphorated elixir of Calisaya of Messrs. Caswell, Mack & Co. of New York. We cannot see the advantage of these preparations, and therefore cannot recommend them; the physician has always at hand the cordial tinctures and syrups if he desires to disguise the flavor of his drugs.

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### Difficulties of American Medical Journals.

The great advance in the price of paper in the United States, has had a bad effect upon the Medical periodicals of our neighbors. The American Medical Times, published at New York, has been obliged for the present to suspend publication. We hardly think that this fact redounds to the credit of the profession. In Philadelphia, the *Medical* and *Surgical Reporter*, appeared irregularly for several weeks, but is once more out in regular season.

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## MEDICAL NEWS.

The number of students, that will attend the lectures at McGill College this session, promises to be very large. Dr. Blackburn, a southern physician residing in Montreal, whose services were accepted by the military authorities to proceed to Bermuda, at the time of the outbreak of yellow fever, has returned to this city.

Dr. Barnes has been appointed Surgeon General of the United States Armies *vice* Dr. Hammond, dismissed the service. The latter claims that his dismissal was occasioned by conspiracy, false swearing, and a malignant abuse of official power. — Dr. Kidd, of London, with regard to the best method to be adopted in administering chloroform, (Medical Circular, August 31), says: "The best form of inhaler is a plain dinner

napkin, pinned in the form of a cone. It is at once beautifully clean and safe, when the ordinary metal inhalers smell of decomposing organic matter, saliva, mucus, &c., of previous patients."—Professor Priestley, of King's College, London, has been appointed to attend the Princess Louisa of Hesse, on her approaching confinement. — Mr. Spence has been appointed Professor of Surgery in the University of Edinburgh, in *lieu* of Professor Miller, deceased. Mr. Lister closely contested the chair.

The Queen has been graciously pleased to signify her intention to confer the decoration of the Victoria Cross on the undermentioned officers of her Majesty's army, whose claims to the same have been submitted for her Majesty's approval, on account of acts of bravery performed by them in New Zealand, as stated against their names, viz:—Assistant-Surgeon William George Nicholas Manley, Royal Artillery, for his conduct during the assault on the rebel pah near Tauranga, New Zealand, on the 29th of April last, in most nobly risking his own life, according to the testimony of Commodore Sir William Wiseman, C.B., in his endeavor to save that of the late Commander Hay, of the Royal Navy, and others. Having volunteered to accompany the storming party into the pah, he attended on that officer when he was carried away mortally wounded, and then volunteered to return in order to see if he could find any more wounded. It is stated that he was one of the last officers to leave the pah. Assistant-Surgeon William Temple and Lieutenant Arthur Frederick Pickard, Royal Artillery, for gallant conduct during the assault on the enemy's position at Rangiriri, in New Zealand, on the 20th of November last, in exposing their lives to imminent danger in crossing the entrance of the Maori keep, at a point upon which the enemy had concentrated their fire, with a view to render assistance to the wounded, and more especially to the late Captain Mercer, of the Royal Artillery. Lieutenant Pickard, it is stated, crossed and recrossed the parapet, to procure water for the wounded, when none of the men could be induced to perform the service, the space over which he traversed being exposed to a cross-fire; and testimony is borne to the calmness displayed by him and Assistant-Surgeon Temple under the trying circumstances in which they were placed.

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The tables of mortality for September and October are unavoidably omitted. They will appear in our next.

# ABSTRACT OF METEOROLOGICAL OBSERVATIONS,

*Taken at the Montreal Observatory, Latitude* 45° 31′ *N. Longitude, 4h.* 54*m.* 11*s. W. of Greenwich. Height above level of the Sea* 182 *feet. For the month of September*, 1864.

BY CHARLES SMALLWOOD, M.D., LL.D., D.C.L.

| Day of Month. | Reading of the Barometer, corrected, and reduced to 32° F. | | | Reading of Thermometer. | | | Mean Tension of Vapor. | Mean Humidity of the Atmosphere. | General direction of Wind. | Horizontal movement in 24hours in miles. | Mean extent of Clouds in 10ths. | Depth of Rain in inches. | Depth of Snow in inches. | Ozone in 10ths. | Weather, &c. | Remarks for the Month. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Highest | Lowest. | Mean. | Max. | Min. | Mean | | | | | | | | | | |
| | Inches. | Inches. | Inches. | | | | | | | | | | | | | |
| 1 | 29.919 | 29.897 | 29.906 | 88.1 | 53.0 | 72.3 | .628 | .775 | W bys | 114.80 | 3.3 | .... | .... | 1.0 | | Barometer .. Highest, the 7th day, 30.195 inches. |
| 2 | .878 | .819 | .841 | 76.0 | 53 1 | 66.1 | .522 | .792 | N E | 99.30 | 9.6 | .... | .... | 1 3 | | Barometer .. Lowest, the 15th day, 29.421 " |
| 3 | .759 | .724 | .741 | 64.2 | 51.0 | 59.1 | .481 | .889 | N E | 60.09 | 10.0 | 0.089 | .... | 2.6 | Rain. | Barometer .. Monthly Mean, 29.753 " |
| 4 | .742 | .721 | .727 | 59.1 | 54.2 | 51.1 | .422 | .891 | N E | 139.29 | 10.0 | 0.942 | .... | 2.6 | Rain. | Barometer .. Monthly Range, 0.774 " |
| 5 | .906 | .867 | .889 | 66.2 | 48.2 | 58.0 | .455 | .907 | N E | 100.29 | 5.3 | .... | .... | 2.3 | Au. Bor. | Thermometer Highest, the 6th day 88°0. |
| 6 | 30.069 | .990 | 30.019 | 88.0 | 48.0 | 67.9 | .575 | .793 | N N E | 77.59 | 0·0 | .... | .... | 1.3 | | Thermometer Lowest, the 26th day, 32°9. |
| 7 | .195 | 30.191 | .193 | 75.7 | 47.0 | 58.6 | .467 | .861 | W N W | 14.79 | 0.0 | .... | .... | 1.3 | | Thermometer Monthly Mean, 58.91. |
| 8 | 29.964 | 29.959 | 29.961 | 72 1 | 48.2 | 61.1 | .475 | .842 | N E | 54.34 | 6.6 | ... | .... | 1.0 | | Thermometer Monthly Range, 55°1. |
| 9 | .764 | .624 | .689 | 69.1 | 48.3 | 62.2 | .417 | .863 | S W | 90440 | 8.0 | 0.031 | .... | 2.0 | Rain. | Greatest intensity of the Sun's rays, 111° 9. |
| 10 | .634 | .553 | .596 | 61.2 | 48.1 | 58.4 | .428 | .874 | N W | 138.74 | 5.3 | .... | .... | 2.0 | | Lowest point of Terrestrial radiation, 31° 7. |
| 11 | .673 | .641 | .654 | 65.9 | 54.2 | 60.1 | .457 | .878 | N E | 90.30 | 9.6 | .... | .... | 2.0 | | Mean of Humidity, .870. |
| 12 | .757 | .616 | .705 | 55.2 | 49.4 | 50.3 | .352 | .935 | N E | 90.07 | 10.0 | 0.084 | .... | 3.0 | Rain. | Rain fell on 19 days, amounting to 3.482 inches, it was accompanied by Thunder on 1 day. |
| 13 | .679 | .617 | .657 | 54 7 | 48.0 | 52.8 | .375 | .923 | N E | 152.20 | 10.0 | 0.171 | .... | 3.0 | Rain. | |
| 14 | .611 | .576 | .597 | 60.9 | 46.8 | 55.9 | .407 | .913 | N E | 227.14 | 10.0 | 0 171 | .... | 2.3 | Rain. | Most prevalent wind, N. E. |
| 15 | .500 | .421 | .454 | 58.1 | 54.2 | 55.1 | .445 | .954 | W S W | 33.50 | 10.0 | 0.100 | .... | 2.3 | Rain. | Least prevalent wind, N. N. E. |
| 16 | .574 | .472 | .519 | 54.2 | 47.9 | 52.1 | .390 | .893 | W S W | 188.75 | 8.0 | 0.362 | .... | 1.6 | Rain. | Most windy day the 27th day, mean miles per hour, 10.54. |
| 17 | .860 | .779 | .814 | 72.2 | 43.3 | 58.8 | .480 | .909 | W N W | 103.25 | 1 3 | 0.034 | .... | 2.0 | Rain—A.Bor. | |
| 18 | .869 | .509 | .727 | 74.6 | 57.1 | 64.4 | .568 | .917 | W | 203.00 | 8.0 | .... | .... | 2.3 | Lightning. | Least windy day, the 15th day, mean miles per hour, 1.39. |
| 19 | .700 | .473 | .629 | 60.1 | 44.7 | 58.1 | .448 | .898 | S W | 120.70 | 10.0 | 0.162 | .... | 2.6 | Rain. | |
| 20 | .807 | .716 | .772 | 70.9 | 43 2 | 58.4 | .383 | .872 | W S W | 135.80 | 8.0 | Inapp | .... | 2.0 | Rain. | Amount of Evaporation 1.17 inches. |
| 21 | .807 | .749 | 785 | 64.7 | 48.7 | 58.2 | .423 | .851 | W S W | 79.40 | 8.0 | Inapp | .... | 1.6 | Rain. | Aurora Borealis visible on 2 nights. |
| 22 | 30.011 | .873 | .922 | 60.2 | 33 7 | 50.1 | .323 | .850 | N E | 82.68 | 5 3 | Inapp | .... | 1.3 | Rain. | |
| 23 | 29.730 | .566 | .646 | 81 0 | 64.1 | 65.6 | .575 | .886 | N by W | 100.26 | 7 6 | .... | .... | 1.0 | | |
| 24 | .521 | .507 | .515 | 69.4 | 63.4 | 64.2 | .544 | .883 | S W | 142.49 | 7.6 | Inapp | .... | 2.0 | Rain. | |
| 25 | .774 | .510 | .625 | 55.9 | 46.1 | 51.3 | .327 | .846 | N E | 76.15 | 6.6 | 0.261 | .... | 2.0 | Rain. | |
| 26 | .824 | .800 | .811 | 69.4 | 32.9 | 50.7 | .354 | .863 | N W | 124.40 | 1.3 | .... | .... | 1.3 | | |
| 27 | .604 | .583 | .595 | 76.4 | 37.4 | 64.6 | .754 | .884 | W | 271.95 | 6.0 | 0.140 | .... | 3.0 | Rain. | |
| 28 | 30.061 | .609 | .833 | 76.9 | 48.4 | 65.5 | .541 | .873 | W | 191.49 | 4.6 | 0.064 | .... | 1.3 | | |
| 29 | .096 | .590 | .842 | 62.3 | 40.9 | 55.5 | .392 | .846 | W | 103.56 | 9.6 | Inapp | .... | 2.0 | Rain. | |
| 30 | .100 | .804 | .968 | 61.1 | 43.0 | 51.6 | .343 | .868 | W | 224.60 | 3.3 | 0.872 | .... | 3.3 | Rain. | |

# CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Gastrotomy for the removal of Ovarian and other Tumors from the Abdominal Cavity.* By ROBERT NELSON, M.D., New York.

The operation of gastrotomy may be needed for several purposes; but principally for the removal of tumors situated within the peritoneal cavity. There are three kinds of tumor that particularly call for gastrotomy; and which, without this operation, end always in death: 1st. Ovarian tumors. 2nd. Fibrous out-growths from the uterus. 3rd. A fibro-adipose mass that may have its origin and seat between the layers of the broad ligament, or in the parenchyma of the ovary; or in the annexes of these organs.

The *ovarian tumor* most frequently met with is the *mutilocular* variety, commonly called ovarian dropsy. It occurs between the ages of eighteen and twenty-five years, and thirty to sixty years; that is, about the periods of nubility and its cessation. It consists of a general hypertrophy of all the tissues that constitute the ovary—its internal structure, its capsule or external coat, and the peritoneum that covers it. All these enlarge, not by stretching, but by growth. Within, it is made up of numerous cysts that vary in size from that of a currant to an orange, and some of them even to a sac capable of containing ten to fifteen pints of fluid. The smallest of these cysts are the newest, and are filled with a glutinous transparent fluid; but that which is contained in the larger and older cysts is thick, ropy, opaque, and colored from light bluish to dark brown. Each cyst is lined with its own proper membrane, of a quasi mucous character, and they are separated from one another by intervening septa of cellular tissue, which tissue gives passage to the long slender and delicate vessels that supply the cysts. They are said to be graafian vesicles. They adhere to one another, and to the outward envelope when next to

it. The whole mass is of rapid growth, enlarging the abdomen in the space of a year or so, to the size of a full pregnancy; and when, after repeated tapping and refilling, the parieties of the abdomen yielding with more and more ease to the distention from within, the tumor may attain to a size weighing seventy pounds. The largest cysts lie in front, and by paracentesis will discharge from a few to fifteen or twenty pints of fluid. This operation gives all the other cysts an opportunity to increase, and to the lately emptied one to refill. When the tapped cyst is quite emptied, the trocar is compressed by the adjoining cyst out of the line of entry, and made to lie against the front of the abdomen. Some operators have taken advantage of this to thrust the instrument into a second cyst; but not without danger, for an intermediate vessel has been before now wounded, and has bled internally into the sac, even to filling it, resulting in the death of the patient; for the patient is generally much reduced at this time, and her volume of blood greatly diminished. Such an error would be avoided by a practitioner acquainted with the structure of an ovarian dropsy, and the distribution of the vessels that run into the septa. Another error, one that has run the rounds of the journals, would not have been committed and cruelly repeated—that of emptying *one* cyst and injecting it with that universal panacea—iodine—had the operator reflected for a moment that he had treated only *one* cyst, while he left *one* hundred untouched; to say nothing of the stupidity of supposing that an analogy existed between hydrocele, and the cysts in an ovarian dropsy—the first a disease in a serous membrane and a single cavity, attackable in its whole extent, and capable of throwing out adhesive matter subject to organization; while the second consists of a multitude of separate and uncommunicating cysts, each lined with a *quasi mucous* membrane, incapable of throwing out plastic (fibrinous) matter, and becoming organized into an adhesion that should unite the parieties of the sac, and so obliterate the cavity.

The growth of an ovarian tumor is rapid, but unaccompanied with pain, excepting that which is due to distention of the parieties of the abdomen. There is also distress, when large, from its encroachment into the thorax, pushing the diaphragm as high as the fifth, or even the fourth rib, producing dyspnœa; also by the pressure on the stomach, leaving to that viscus little capacity for the reception of food. In a few cases it will cause a partial ascites by its pressure on the large visceral veins and on the kidneys. When the tumor has attained to a large size, the length of the linea alba from the pubis to the ensiform cartilage has reached the extent of twenty-eight inches in two of my cases.

*Fibrous out-growths* from the uterus into the peritoneal cavity gene-

rally proceed from the superior part of the uterus; sometimes from the front, or back, or any other part of it, and is immediately covered by peritoneum, hence called *superitoneal*. A portion of the tumor is contained within the walls of the organ, the two commingling by degrees that render it difficult to say where one structure ceases and the other begins. When the tumor is largely developed between it and its peritoneum, numerous broad veins are seen on the surface, leading inexperienced spectators of an operation to exclaim, "what large *varicose* veins." These veins are not in a varicose state, not having their parieties thickened or hypertrophied; but are only expanded laterally; they are nearly flat, and their parieties are thin like ordinary veins, and being flat contain little blood, since, like all flattened tubes, their area is much less than those which are cylindrical, a form of the greatest capacity. The arteries that lead into the tumor are few in number; but, within the new structure, they become numerous, though of small calibre; yet, their united areas much exceed that of the afferent vessels. Hence it is that fibrous tumors that ulcerate within the womb, or are wounded, pour out blood abundantly, because their vessels are, to some extent, held patent by the inelastic fibrous body in which they course, and in this way draw upon the afferent vessels, more than these furnish when the tumor is in its integrity, and its vessels simply filled. The structure of the tumor is distinctly homogenous and fibrous throughout, as seen in a very large one that I extirpated (and in many others), composed of inextricable fibres, yellowish, dense, resembling boiled cow's udder, capable of being cut into slices without collapsing. This kind of tumor progresses very slowly; taking ten or more years to reach the size of a man's head; but, at last, takes on activity, and then grows rapidly, to the sure destruction of the patient, if it be not extirpated. While slowly increasing in size during many years, it does not disturb the health or even the comfort of the patient, giving no pain until of large size, and then only such as is due to unequally distributed distention of the abdominal parieties, more so when its shape is irregular, or its surface is bosselated by outgrowths from its own surface.

As long as the case is not troublesome to the patient, and its growth is slow, it had better not be meddled with; for such cases can go on for many years, and possibly the patient die from some intercurrent malady or accident in the interim, before the tumor shall put on activity and become dangerous. Besides, the longer a patient endures a disease curable by surgical means, the less is the danger that follows an operation. And the more the abdomen becomes stretched, within bearable limits, the more safely it may be cut into with less apprehension of subsequent

inflammation; hence it is, that success is more likely to follow an operation for a large than a small tumor, to follow a protracted than a recent case.

In illustration of these statements regarding fibrous outgrowths, I now give two cases out of several. A discreet and virtuous woman, but of a salacious temperament, married at about twenty, and became a widow two years after, without having been impregnated, although, according to her statement, her connubial state had been quite satisfactory to her. Previously to her widowhood she felt an uneasiness or weight in the pelvis. As this increased she perceived that something was enlarging within her. She consulted many practitioners, when, at last, a tumor in the hypogastrium became palpable. This was diagnosed, at the time, as ovarian. Iodine internally and externally, leeches on the abdomen, and emetic-tarter pustules kept cropping out for several months, leaving their indelible marks on the surface of the abdomen, was the treatment pursued unavailingly. At last the tumor presented a bi-lateral or double appearance, the larger one filling one iliac region, and the lesser one occupying the opposite region; between the two, under the linea alba, there was a distinct hiatus. She was now told that she had enlargement of both ovaries; various medicines were persevered in unavailingly; and she at last gave up "doctoring." All this time she enjoyed perfect health excepting the disturbance produced by futile medication. Her appearance was attractive, and her sexual desires great, which led to a second marriage, after she had honestly made her case known to her suitor. She married. All went on as usual for two years, when, without perceptible cause, the "two" tumors began rapidly to increase in size. I now saw her for the first time, and got from her the foregoing history. On examination, not finding fluctuation or elasticity, conditions that belong to ovarian dropsy, and thinking of the slow progress of the case, I told her and her husband that there was no disturbance in the ovaries (her catamenia regular, and the sexual appetite as generous as heretofore); but that the resisting nature, and the hardness of the "two" tumors was different from what happened in ovarian tumors.

They requested an operation, which I hesitated to undertake, but at last consented to do it. She went home, a distance of a hundred miles, to settle household affairs, and returned in eight days. In this short period, so rapid had been the increase, that the tumor reached half way between the umbilicus and scrobiculus, and she had become lean and looked much exhausted. A long incision, from the pubis to near the pit of the stomach, was made, exposing the tumor, which was a single one, with two outgrowths from its surface, the whole springing from the greatly

enlarged base of the uterus. It was cut off and removed, she made a good recovery in four weeks and continued well after. The tumor was covered under the peritoneum with broad meandering veins. The arteries that entered the pedicle were small where it was divided, and easily secured. The tumor itself was a solid homogeneous mass, hard and resisting, and divisible into large yellowish slices, showing very few sections of vessels.

The second case is that of a married lady, the mother of two children, the youngest approaching puberty. A year or two after her last confinement she thought there was something unusual going on in the pelvis. In the course of a few years, a round, hard tumor gradually ascended into the hypogastrium, which continued to grow very slowly when I saw her, about ten or twelve years after its commencement. She suffered no pain or other inconvenience from it. I therefore advised her to do nothing. I heard of her a few years after, and she was in her usual health.

A third case I may as well mention. A married woman who had borne children, presented an abdomen as large as a pregnant one. She had had it some years. I saw her about a month before she died, in considerable suffering, but without fever of any kind. It grew from a much enlarged uterus, as seen on dissection, was solid throughout, and resembled the one first described.

*The Fibro-Adipose Tumor* is composed of large fatty masses separated from each other by tenacious cellular tissues and fibrous bands, but no where distinctly separate. These masses vary in size, from that of a fist to a fœtal head. The whole are enclosed in a fibrous envelope, and the peritoneum is spread in front above and over all. One that was removed by operation weighed thirty pounds, and another forty. They seem to be generated within the broad ligaments, at least this was the case in both instances just now mentioned. Hypertrophied fibres of these ligaments, much lengthened and more or less separated from each other, enveloped the mass all round and sent bands into the new structure, growing with the tumor. The peritoneum expands before it, behind and all round, excepting where it has its attachment, which is very extensive, like a mesocolon, to the last lumbar vertebræ, promontory and hollow of the sacrum. In the few cases I have seen it had extensive adhesions to the whole front of the abdominal parietes—some few to a loop or two of intestine. Through the parieties of the abdomen the tumor gives a softer or more yielding feeling than does the fibrous outgrowth from the uterus; and, on palpation there may be felt a deceptive sense of fluctuation, which is due to the quality of the fat, of a very soft nature, in them, it being much less dense than that which is met with in lipomas

under the common integuments. This apparent fluctuation I have known to deceive a surgeon. These tumors and their lobes are supplied with few but not large arteries; and, abundantly with expanded veins, some of them resembling sinuses. These fatty tumors are less rapid in growth than are the ovarian, but more so than the purely fibrous outgrowths from the uterus.

There are other abdominal tumors occasionally met with that might possibly be relieved in some cases by an operation; but the three kinds I have mentioned are those that specially call for gastrotomy, which may be undertaken with hope of success, and which are sure to end in death if not removed.

### ADHESIONS.

All these tumors, when of long standing and grown large, are liable to become adherent to the anterior parieties of the abdomen, sometimes even to the liver, which they crowd up, to the diaphragm, or to the spleen, or to some portion of the omentum; but this last, in most cases of very large tumors has become more or less absorbed by the pressure they make against it. Posteriorly there are few, if any adhesions, which absence is due to the almost ceaseless peristaltic movement of the intestines, and their alternate distention and collapse, affording no time for union to become effected.

These adhesions are not due to inflammation, effusion of lymph and its subsequent organization; for, in all the cases I have observed, excepting one, the patient has at no time suffered from any—the slightest—symptom of fever, or from that peritoneal pain that invariably accompanies inflammation. The adhesion is due, simply to great pressure of the tumor against the tensely stretched abdomen. In the early stages this tightness does not exist, and the lesser size of the tumor admits of its sliding to some extent during the movements of the patient while getting up, lying down or walking. On the contrary, when the tumor has attained a great size, its anterior surface presses forcibly, and *constantly* against the front of the abdomen, causing the epithelii of the two surfaces to disappear, and by the same cause—its great size—is held steadily in one place, immovable. The two peritonei having come into *immediate* contact coalesce into a single membrane apparently, in those places where the pressure is greatest, constant and fixed; but in other parts less pressed the two membranes adhere less intimately, and can be easily separated by the fingers of the surgeon pressing between them, without giving escape to so much as a tinge of blood, because here no vessels exist.

Having heard that adhesion of separate parts cannot take place with-

out the intervention of inflammation, and its office of throwing out fibrous matter to become organized between adjacent surfaces and thus effecting union between them denied, I may as well give one or two examples, out of many, to prove that an intimate union of naturally separated parts can take place without the intervention of the famous *adhesive inflammation.*

CASE.—A child affected with intervertebral softening, ends with distortion of the spinal column which draws the ribs with it. The arches of the ribs on the convex side of the curvature become widely separated from each other; while the arches of the ribs on the lesser curvature are approximated. The intervening intercostal muscles was by pressure which arrests nutrition and permits the absorption of the effete material to go on, and when the upper and lower edge of the adjoining ribs approach nearer and nearer, until at last the peritoneum of each has ceased to exist, the two ribs *touch*, unite, and in that place form a single, broad and flat rib. All this goes on without the slightest complaint of pain or inflammation, because it is a natural process. It is common enough to get such a skeleton if sought for; and many are to be seen in museums, where not only two but three ribs are united into a single one on the concave side of a distorted trunk.

Another example may be mentioned: A man had his foot badly crushed; it swelled enormously under the treatment, and sinuses formed in the course of some of the thecæ of the tendons. When consulted at a late period, I advised his surgeon to put a thick compress above and below the phalanges with a roller over all, with a view of diminishing the swelling by the absorbent effect of pressure, and to keep all wet with water. This was persevered in too long; the epidermis between the second and third toes was washed away, gradually admitting the reta mucosa of each to come into immediate proximity. When I saw the case subsequently the two toes were united, as regards the soft parts, into one. All this occurred in the complete absence of inflammation, and the effusion of fibrin to become organized subsequently. In this way toes have united, little by little from simple entertigo, they being maintained in contact by pressure. In the case of burns it is different, for here fibrin in a thick coat is quickly thrown out, and if not peeled off will surely organize, and in the subsequent stage, long after having healed, the fibrin becoming absorbed, irremediable contractions gradually follow.

Tumors do not become adherent to the parieties of the abdomen, or viscera, as long as they are small or of recent growth; because they exert no great pressure on the opposite parts and are so mobile as not to stay long enough in contact with one point to become connected.

CASE.—A girl about twenty years of age had ovarian dropsy, which, from the first perception of it to when I removed it, lasted eighteen months. It was non-adherent although nearly thirty pounds in weight. Other patients with similar tumors of about the same size and standing, were without adhesions. A fibroid outgrowth from the uterus of ten years' standing, had reached only a little above the umbilicus, when it suddenly took on rapid growth, and in two or three months after, when I removed it, it was unadherent, although it now filled both iliac regions and reached half way up between the umbilicus and scrobiculus; but then for a long time it was small, and when grown large at last had done so in a period too short to have contracted union by pressure to adjacent parts. It is quite different in large tumors of long standing. A girl twenty-nine years of age had a very large ovarian tumor of over two years, standing. It was adherent to the whole front of the abdomen and sides, to the anterior third of the diaphragm, to a portion of the spleen, and to a part of the liver, but no where to the intestines. After removal it weighed fifty-five pounds. The anterior adhesions were easily severed by the hand and outspread fingers, while in other places the adhesions tore into tough ribbons, and a few had to be cut through. No blood escaped. She quickly recovered notwithstanding the great extent of the adhesions severed. No peritoneal inflammation or fever followed, doubtless because no true peritoneum remained at the seat of adhesions. In several other cases of large and long standing tumors adhesions existed, which must be expected. They will be found strong, according to the length of time they have existed, requiring considerable force to tear through them. In all these cases there need be little fear of hemorrhage as a consequence of their severance.

Before treating of the operation it may be well to examine the subject of inflammation; this is the ghost that haunts many surgeons before and after an operation—especially so when its seat is a serous membrane —bewilders and obfuscates the judgment, induces preparatory measures that always add to the disorder, and after an operation is so prolific through fear of it, of numerous injurious medications to the risk of the patient.

### INFLAMMATION.

Many practitioners regard wounds of the peritoneum as peculiarly dangerous from the inflammation that is apt to follow. Hence has arisen the dread of performing operations within the abdominal enclosure. This fear has so greatly influenced the judgment and practice of some surgeons that they decided, in cases of hernia, to divide the stricture without cutting into the sac, and, in this way avoid wounding the peritoneum, and not

expose it to the much dreaded malignancy of the atmosphere. We have all seen the direful consequences of this innovation, founded on the mistaken notion of regarding all peritoneal inflammation as *of one* kind only, while there are at least *two*, differing from each other in cause and course, each of which is subject to different phases and terminations; which I shall now examine, and endeavour to show that one kind, idiopathic in certain seasons, and countries, is really a fearful disease; and the other —that which is likely to follow gastrotomy is less to be feared than the first. Although what follows is not mentioned in books or in lectures, let it be borne in mind as an axiom, that any inflammation is merely an *accident* to many diseases which differ widely from each other; that it is never the cause of the malady; but is always the effect of a disturbance elsewhere situated—near by, or far off, and sometimes is of so prominent a character as to be taken by some practitioners as being itself the whole disease, and the only thing to be combatted.

### 1*st*.—IDIOPATHIC INFLAMMATION.

A remarkable example of the erroneous opinion entertained regarding inflammation, among a thousand others that arose and lived a day, was that of the celebrated Broussais and his disciples, a doctrine that overshadowed all "Young Europe" for a few years, and filled so many untimely graves. He and they denied the possibility of Idiopathic or Essential fever, as the schools call it, on the ground that they always found in every fever some one or other organ inflamed—true, so far; and asserted that the inflammation seen was the cause of the fever. They disregarded the fact that the fever in *every* case had existed several days before the local disorder—inflammation—became manifest; passed over the patent fact that, in the same fever, during the same epidemic, patients in the same house, at the same time, might have the local disorder—inflammation—(as in typhus) situated in a different organ in one patient, it might be muco-gastritis, in another an enteritis, in a third a bronchitis, in another an arachnitis, while the fever—typhus—was the same in all.

In variola, the fever (which is the real disease) exists with violence three whole days before the irruption; six before the commencement of areolar inflammation. In *idiopathic* erysipelas the fever precedes the local disorder at least twenty-four hours;—and so on, for every *essential* fever or disorder.

*Idiopathic peritonitis* and enteritis are always preceded by fever, more or less marked: but, the inflammation once become manifest, like in the irruption in variola, and other exanthemata, the inflammation is the most notable condition of the patient. The idiopathic peritonitis is a specific

disease, due to a general cause; it rapidly spreads, in high latitudes, over the whole peritoneum—parietal and visceral,—throwing out a thick layer of fibrin, and, there, too often ends in death in a few days; so also, in puerperal peritonitis; but here, the effusion is less fibrous or solid than in pure peritonitis. These inflammations are due to occult cause hidden in the system. The physician claims the attendance on these cases as peculiarly belonging to his branch of what may be truly called the *black art* of the profession—conjecture bedaubed with speculative imaginings; claiming that the physician alone is competent to prescribe, holding the knowledge of the surgeon in contempt as compared with his conceit.

### 2*nd*.—TRAUMATIC INFLAMMATION,

As the name implies, is always due to mechanical injury, and varies in severity according to the nature of the lesion—bruising, tearing, or simple clean cutting. It is a very different affair from idiopathic inflammation, which has a prescribed course to run, and which is merely the expression of a disease in the whole system. The traumatic is merely the sequel of a local injury. It rarely becomes manifest before twenty-four hours after the accident; and in four or five days produces pus, a natural crisis, the generation of which mitigates all the inflammatory symptoms, unless the lesion have some poison, morbid or chemical, added to it, in which case it may increase even after the generation of pus, and progress indefinitely. But in a healthy person, should the lesion consist of a clean cut, and the edges be brought nicely together, union will take place without the intervention of inflammation, even of that slight degree erroneously called "adhesive." This result I have seen in several cases of gastrotomy.

There is a difference in the amount of inflammation that follows wounds in different parts of the body, or when the patient is unhealthy at the time of being wounded. A cut into the abdominal cavity of persons that have had it previously much distended, as by pregnancy, by large ovarian or other large tumors, is followed by much less inflammation than in those who have not so suffered. Every surgeon of only a few years' practice has noticed that small cuts, like that of a penknife into the abdomen of a man, or of a female who has never been stretched, is a rather serious affair; while a similar stab into a previously distended abdomen, by even a worse instrument—a trocar—is seldom followed by peritoneal inflammation.

In the case of gastrotomy for the removal of tumors, the cause of this is very simple and of easy explanation. In the slowly and long stretched abdomen, all the parts that conspire to form its lateral and anterior

boundaries have been gradually expanded in both latitude and longitude, but not in thickness, the parts did not *grow*, as the pregnant uterus. The vessels elongate, but scarcely enlarge, they rather diminish in calibre, for instance, the epigastric artery which, in the natural state, reaches from Poupart's ligament to the upper section of the rectus, there to anastomose, with branches of the substernal—and lower intercostals, is scarcely nine inches long, while on the largely distended abdomen from pregnancy or tumors it is drawn out to twenty-four or twenty six inches, according to the degrees of stretching of the abdomen, which I have known will reach twenty-eight inches from the pubis to the ensiform cartilage. The veins will correspond in elongation, but not in capacity, they appear to superficial observers much larger than natural, while in reality they are not so; they, like all the other tissues, are merely expanded in length and breadth, but not in capacity, for, on close examination they will be found, although much broader than usual, to have no more or less capacity than usual, by reason of the approach of their anterior and posterior sides, rendering them into flattened tubes, which shape, however broad, is of small capacity, by reason of their diminished area. This state of the veins, it may be mentioned here, is very striking in appearance on the surface of any abdominal tumor, so much so, that I have heard spectators of an operation exclaim "how varicose the veins are," while no varicose state exists.

Once more: All the tissues that conspire to constitute the abdominal parieties are stretched by tumors equally. The skin so much so as to suffer long lines of partial rupture of its chorion, ruptures that are never recovered from, and which leave those marks constantly seen in women who have borne children, wrongly called vergitures. The muscles, their tendons and fasciæ also spread out greatly both in length and breadth, but not in thickness, for there is no growth. Each rectus, instead of being only two and a half inches wide, expands to four or more; its sheath increases proportionately, as I have seen when a bungling operator deviating from the medium line, has laid the sheath open, the edges of the muscles not reaching its breadth and not filling its capacity. The length of the rectus with its intervening tendons, in extreme cases, has been twenty-eight inches, instead of ten or eleven, the usual length. What the muscles just named have suffered, all accompanying tissues with their nerves and vessels, have undergone in equal proportion.

The consequence of this expansion is, when the distending force, the tumor, is removed, the parieties, whose contractility has been greatly overcome, and to some extent lost, recover their primitive proportions very slowly, but never completely. This recovery is not wholly due to con-

tractility that interests all the molecules of the parts, it is partially so, but is mostly effected by a folding of the fibres one against another; in this corrugation the vessels and nerves participate, bending into numerous flexuosities, a condition that not only retards but obstructs the passage of blood through them, a state ill adapted to furnish that supply of blood which is *one* of the essentials of acute inflammation. Hence it is, that gastrotomy, for the removal of large tumors, is followed by very trifling inflammation, when the operation has been well performed, and the case well managed subsequently.

On the other hand, an abdomen that has not suffered the extension mentioned resembles other parts of the body as regards the inflammation that follows injuries, since the tissues are actively contractile like elsewhere; the vessels are short and round, with a full calibre instead of long, and in the case of the veins flat without capacity and contractility; the nerves also have been stretched and proportionally paralyzed.

Having hastily noticed the difference existing between idiopathic and traumatic inflammation, and the reasons why the latter is less to be dreaded than the former, especially in gastrotomy when performed on a stretched abdomen, I now proceed to examine the question of

TEMPERATURE OF THE APARTMENT

in which the operation is to be performed. The early operators, anxious for success, but having no facts to rely on, theorized in advance as to what might interfere with, or favor, the result; and, among other ideas, imagined that inasmuch as the temperature of the viscera was constantly near 100° Fahr., the room in which the operation was to take place ought to be heated to that degree, lest a colder atmosphere should provoke great irritation on the exposed parts. Had these practitioners called to mind the numerous cases of wounds through which the bowels have escaped, and been exposed for some length of time, and which subsequently did well, they might have banished the fear of cool air, and have saved themselves and their patient from the oppression of a torrid atmosphere. The length of time necessary to complete a well-conducted operation is so short, that a moderately cool air (between 50 and 60 degrees) has not time to act injuriously, while the heated room will prove far from beneficial. I operated on a patient living in a temporary house—a mere shanty —where there was no means of heating it, on a dark, rainy day in the month of December, while the temperature was so low as 46 deg. Fahr. —so low that our breath was visible, as was the steaming hillatus from the open abdomen of the patient. Not one anxious symptom followed, the patient recovered perfectly in twenty days, and has since become the mother of two children.

Another patient was operated on in a room opposite a large window, which was kept open to admit light, and through which blew a smart breeze at 60 deg. Fahr. This patient did well, and quite recovered in the space of three weeks. In every case that I have had since these, the operation has been performed regardless of either temperature, or exposure of the viscera to the air. Let, then, the heated bugbear be banished from the precautionary paraphernalia attendant on this operation.

### HOT CLOTHS EMPLOYED TO PROTECT THE BOWELS FROM AIR AND TO RETAIN THEM FROM PROTRUSION

Constitutes the next injurious precaution that a false theory has engendered, put into practice, and is still in use by some operators; a practice that is even worse than that of the heated atmosphere just condemned. Any meddling with the protruded bowels is more injurious to them than to permit them to escape freely, should they do so, which does not always occur, and is most likely to happen when the tumor is small, because in that case the abdomen is more contractile that when it has been greatly stretched by a large tumor. Suffer the intestines to escape and remain outside until the tumor is removed. To see assistants busily engaged in futile endeavors to return the intestines during the operation, and by so doing embarrass the operator at a time that they cannot be controlled; to see loop after loop poked back and re-escape between the busy fingers of three or four hands; to see fruitless efforts made to restrain the truant parts—is a sight humiliating to a good and experienced surgeon. Does not the operator know that all this manipulating, pawing, fingering and poking among the slippery intestines, must interfere with, or remove, or abrade the thin varnish and epithelium that invest and protect the surface of the escaped parts; and that, under such treatment, they must become greatly irritated? Does he not perceive that such conduct is many times more injurious to them than could possibly be that air he so much dreaded, and uselessly heated? But the case grows worse when the hands of the assistants are armed with steaming hot cloths—even flannel bristling with sharp points of hair.

Imagination has become so exalted as to propose a protecting medium between the hands and the viscera, against their injurious contact with the peritoneal surfaces. This is, as far as it goes, an admission that contact (meddlesome hands) is injurious. To imbue the operator's hands with any material is to apply it to the surface where it is not needed; and there is no art that can make serum—a living substance—itself not destitute of life. While on this subject it may be as well to say that the best application to the hands is clean washing; and perhaps, coarse, hairy,

red, freckled, and sweaty hands had as well be excluded from participating in the operation.

*(To be continued.)*

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*On the Pathology and Treatment of Ileus.* By GEORGE PATON, M. D., M.R.C S.E., &c., Bowmanville, C. W.

*Continued from page* 219.

IV. A patient who has hitherto enjoyed good health, is suddenly seized with ileus, and expires after a few days' illness. On inspection after death, a portion of intestine is found greatly distended, and immediately below this point, empty and contracted. Pathologists differ concerning the original seat of the disease in these cases. Is it connected with the dilated or the contracted portion of the intestines? We have seen that in cases where there is great and uniform distention, it extends throughout the whole tract of the canal—the gas in its passage along the numerous convolutions of the bowels, over-distending their muscular tissue, and impairing and destroying their function, and in cases where the distention is partial, that is, confined to a particular portion of the bowels, we are able to account for it, from an obstruction existing in the passage, interfering with the free descent of matters along the canal, and in accordance with a general law in the animal economy, gas is generated to a greater or less amount in the superior portion of the bowel, which on the impulse proceeding from above, over-distend the walls of the tube and impairs its functions. But have we any evidence or data to show that distention may take place and be confined to a particular portion of the bowel, without any obstacle or obstruction existing below that point to account for it? We think not. We know of no cause for the distention of a portion of the bowels, except the matters and generated gas which it contains. And if these are not arrested in their course, we do not see how the effect can be produced.

It has been stated by some pathologists as probable, that there arises at a certain period of ileus a loss of muscular power in a portion of the intestinal canal, in consequence of which it does not act in concert with the other parts, but becomes distended by the impulse from the parts above, which in the healthy state would have excited it to contraction.* But as stated, there is no proof to shew, that the muscular power of a portion of the intestinal canal can be lost or destroyed, when inflammation is not present, except by the over-distention of the part, and this

* Dr. Abercrombie on Diseases of the Stomach and Bowels, page 137.

can only be effected by the matters and gas which it contains, being arrested in their course,—exerting a pressure from within. The loss of the muscular power is the consequence of the distention of the bowel —not the cause of it.

If that hypothesis is not applicable to the distention of a portion of the intestinal canal, we do not see how it could explain these cases when a great and uniform distention existed throughout the whole. It is not easy to understand how the whole of the tube could lose its muscular power at once and then become distended; or if it took place by degrees, how it could be affected, except by the gas contained within its cavity.

If we are permitted to argue from analogy, it will be seen that in other cases of ileus attacking adults, the contraction of a portion of the bowel is intimately connected with obstruction existing at the part. Why should it not be admitted in the cases, now under consideration?

In the case of a post mortem examination, the patient aged 20, having died of ileus—strangulation of the intestine, after undergoing a severe operation. * * * "The omentum was cut through transversally about its middle, and the intestines below exposed, which were greatly distended with gas. Where were found to be portions of the ileum, the coils of which were more or less adherent to each other, to the mesentery, omentum, and to the neighboring organs, by bands of chronic lymph. The adhesions were now carefully torn through, the gut liberated, and traced downwards. Exactly five feet and a half from the cœcum, above and to the left of the umbilicus, the intestine was constricted by a band of lymph, as if a ligature were tied round it. Above the constriction the gut was distended to about the size of the wrist; below it was collapsed to the size of the little finger. Air could be passed from the superior portions into the inferior, but the passage of water poured from above was completely checked at the seat of stricture. All the intestines above the stricture were greatly distended with gas; those below it, including the cœcum, colon, and rectum, were small and collapsed.*

In another case, where a man aged 29 died of ileus, after nine days, illness, there was obstinate constipation of the bowels, which no medicines could overcome, distention of the abdomen—and feculent vomiting. The post mortem appearances—"Redness of the mucous membrane lining the stomach and upper part of the ileum; the transverse arch, and descending portion of the colon to the sigmoid flexure, distended

* Edinburgh Medical and Surgical Journal, No. 167—page 302.

with fluid fæces. Below this, the intestine was contracted so as scarcely to admit the little finger; and this contraction extended throughout the remainder of the intestine, downwards about twenty inches, through the rectum to the anus. A rent was made whilst removing the intestines from the body, in the mucous membrane of the sigmoid flexure of the colon, from the weight of the feculent matter above the stricture."*

In the first of these cases, the strangulation of the bowel arrested the descent of the flatus and feculent matters, and below this, the intestine is empty and contracted. In the second case we find a strong contraction of the bowels to the extent of twenty inches, preventing the further descent of the matter along the canal. Was this a natural or morbid condition of the parts? Pathologists who believe that the distention of the parts above, was totally unconnected with this contraction of the parts below, consider this portion of the bowel to be in a natural condition, but empty and contracted. But we are of opinion that we do not find a portion of the bowel in its natural healthy state, either in the dissecting room, or during pathological researches, so strongly contracted as this,—and that it depends on morbid excited action of the parts, and gives rise to the distention that exists above. Dr. Boyd of St. Marylebone Infirmary, lecturer on Practice of Medicine, who examined the state of the parts after death, and reports the case, seems to entertain the same view, for he terms it a *stricture.*†

What is the cause of the contraction of a portion of the bowel? We have already seen that the urethra becomes so firmly contracted during irritation of its mucous membrane that suppression of urine is produced, requiring the catheter for its removal. And in the experiments of Magendie on animals, whilst the lower part of the œsophagus was contracted, he was unable to force any of the contents of the stomach into it, but during its relaxed state, fluids escaped into the œsophagus from the stomach by the force of gravity alone (Muller); and there can be no doubt that a part of the intestinal canal may become so strongly contracted, on irritation of its mucous membrane, as to resist the impulse from above. This we have distinctly seen in analogous cases to which we have referred, the contracted portion of the bowel, being reduced far below its natural calibre, and we believe this is a general law in the animal economy.

A gentleman aged 31 years, was seized with sickness, vomiting and severe twisting pain in the bowels, confined chiefly to the left of the umbilicus, and occurring in paroxysms. Could bear pressure over

* Edinburgh Medical and Surgical Journal, No. 151—page 274. † *Ibid.*

the part, but it seemed slightly to increase the pain. The bowels were obstinately costive. He was bled, fomentations were applied to the abdomen, and afterwards blisters. Purgatives and enemata were exhibited, and every remedy which the nature of the case appeared to suggest was employed by his medical attendants with the greatest assiduity, but without affording relief. The abdomen became swollen, hard, and tympanitic —Prostration increased, and he sank under the disease twelve days after its commencement, no evacuation of the bowels having been obtained.

*Inspection.*—The lower portion of the ileum to a considerable extent, was contracted and empty, and immediately above this the intestine was greatly distended with gas and liquid fæces—It again became contracted for several inches, and above that was much distended with gas to the commencement of the small intestines. Several places of the distended portion of the bowels were of a dark livid color. On examining the contracted portion of intestine, it seemed much smaller in diameter than is met with in a natural contracted state of the bowel,—did not admit the point of the little finger,—and was totally impervious to air or water, on being attempted to be forced along it from the superior portion of the bowel, as was distinctly ascertained on repeated trials.

A gentleman aged 34 years, on a warm day in summer, when thirsty, drank a glass of ale, from which he experienced no inconvenience at the time; but during the night was seized with severe griping pains in the bowels, below and to the left of the umbilicus, which returned at intervals. Was sick, and felt an oppression at the epigastrium, as if a load were placed over it. On raising his head from the pillow was strongly inclined to vomit. Bowels constipated, and flatus not permitted to pass. On taking a little hot milk or other fluid felt relief, but soon after a commotion began in the bowels, extending downwards to the spot below the umbilicus, where it was arrested, and then the pain amounted almost to tormina; coils of intestine could be felt rising through the parietes of the abdomen, and the movement becoming inverted was succeeded by vomiting. The abdomen became slightly tympanitic. A mustard poultice was applied over the bowels,—he took antispasmodics, and employed enemas, but no evacuation was obtained during all that day, and the next night. On the second day, whilst persevering in the use of these remedies, with antacids, a small quantity of flatus passed the obstructed point in the bowels with considerable relief to his sickness and sufferings—and shortly afterwards a small scanty stool was obtained. By continuing the use of the enemata, the bowels were more freely opened; but during that period, severe pain was felt at the obstructed part, and the stools passed away from the bowels as from a syringe or by

jerks. For several days during recovery, pain was occasionally felt at the seat of the previous obstruction, as if some irritating substance had come into contact with the part, and had difficulty in passing along the bowels. Exposure to cold also produced it, and the pain was always relieved by heat, or warm cloths applied to that part of the abdomen.

This case seems to show that contraction may take place in a portion of the bowel, from some source of irritation, sufficient to give rise to the distention of the portion above, by preventing the passage of flatus and feculent matters. And that though complete at the time, it may only be of a temporary nature, as perfect recovery in this case took place, and the gentleman is now in the enjoyment of good health.

On a review of the subject, we think there is sufficient data to show, that the great distention of the whole intestinal canal that occurs in some cases of ileus, depends on the gas being retarded in its passage along the convolutions of the bowels. For if it were expelled from the bowels with as much rapidity as it is formed, distention could not take place; but being retarded and subjected to the *vis a tergo* it over-distends a portion of the bowel and weakens or destroys its muscular power. Irregular peristaltic action now takes place, and the gas, continuing to accumulate, reacts against other portions of the bowels in a similar manner, till a great and uniform distention of the whole intestinal canal is produced,—and is rendered incapable of performing its functions. In this manner we reduce all cases of distention of the bowel, general and particular, under one general law, viz., retardation of the gas and matters along the tube; and subjection to the *vis a tergo*.

It is probable that the formation of this gas is intimately connected with certain articles of food, or condition of the digestive organs at the time. We know that gas is formed in the stomach and intestines—developed during digestion in the whole extent of the intestinal canal (Muller), and when from errors of diet or state of the mucous membrane of the bowels, the gas is formed in great excess, it may, in the manner we have mentioned, produce great and uniform distention of the intestinal canal, and destroy its functions.

On the other hand, when no physical obstruction exists in any part of the bowels to account for the attack, the contraction of a portion of the bowel that takes place as in class IV, is intimately connected with acidity of the *primæ viæ*, as in the majority of cases that have come under our notice, the patients had been eating some sour or acid articles of food, shortly after which ileus commenced. In these cases we have not only the contraction of the bowels to overcome, but the distention that exists above, which, if it be great and have continued for a time may have *weakened* and impaired the muscular power of the part.

In most cases, at the commencement of the disease, when the patient is seen shortly after the attack, antacids, as magnesia, combined with a little aromatic powder, given in hot milk in small and frequently repeated doses—or carbonate of ammonia or some of the other alkalies, will be found of great benefit, at the same time, applying warm fomentations to the bowels—or mustard poultices, and exhibiting enemas. Indeed in cases of ileus in general, we believe that acidity exists to a great extent in the *primæ viæ*, and is intimately connected with the cause of the disease. And our object in this communication, is to draw the attention of the profession, to what may be termed the *antacid treatment* in the first stage of ileus.

M. J., a farmer, aged 52 years, on the 17th of September, 1860, partook at dinner of several slices of cucumber prepared in vinegar, and in the afternoon felt sick and inclined to vomit. During the night he was seized with severe griping pain in the bowels, stretching across the epigastrium, and occurring in paroxysms. Pressure on the part appeared to increase the pain. The paroxysms returned frequently, contracting the abdomen, and drawing him together as he stated, and then the pain amounted to tormina—was often succeeded by vomiting. Pulse 74; he had taken castor oil, but no evacuation of the bowels had been obtained, and flatus could not pass. Was bled, antispasmodics were exhibited, a mustard poultice, and warm fomentations were applied to the abdomen, and an enema given and repeated—and after several hours, no relief was obtained by these remedies. Doses of magnesia combined with aromatic powder were then given in hot milk every twenty minutes, and after taking several doses, he expressed himself easier. The paroxysms began to abate, and flatus had passed from his bowels. In a few hours an evacuation was obtained. Next day he was free from pain, and was soon convalescent.

A gentleman aged 35, Dec. 5th, 1863, was seized during the night with severe pain and twisting in the umbilical region. It occurred in paroxysms and was succeeded by vomiting. Obstinate constipation of the bowels, and flatus not permitted to pass. States, that last night he ate a few nuts, and drank a quart of cold cider, after which he felt uneasy, and severe pain in the bowels, commenced about two o'clock in the morning, accompanied by nausea and vomiting. Pressure could be applied over the part without the pain being increased. The bowels were slightly tympanitic. Pulse 64.

Was ordered at ten o'clock, a.m., small doses of carbonate magnesia and aromatic powder, every twenty minutes in hot milk till several doses were taken, at the same time to apply a mustard poultice over the abdo-

men. And after relief from the pain was obtained by the powders, to employ an enema. About one o'clock, p.m., the severity of the symptoms had abated. Flatus had begun to pass along the bowels in small quantities, and a partial stool had been obtained by the enema. Continued the medicines at intervals, and exhibited another enema, and in the evening he was much relieved—symptoms favorable—next day he was convalescent.

A young man aged 24, during the last twelve months, has suffered much from pain of the bowels and constipation. The pain is seated in the lower half of the abdomen, towards the left lumbar region, and the spot is slightly tender on pressure. He is troubled much with belching of wind, acid eructations, and flatulent distention of the abdomen, which is always increased by certain articles of diet, as vegetables and potatoes—drinking beer or diluted spirituous liquors—and by exposure to cold and fatigue. On these occasions his bowels become obstinately costive—flatus is confined—and uneasy sensations entered through the abdomen—appetite impaired, pulse 68. Percussion over the part elicits a dull sound, but immediately above it is tympanitic, and the convolutions of the intestines can be distinctly traced—there is evidently contraction existing at a point of the bowel, interfering with the free descent of matters along the canal, and giving rise to the distention above. Purgatives had been employed, and medicines to promote digestion. But antacids are the remedies from which he has felt most relief, as the pain and severity of the symptoms generally abate in a few hours after they are exhibited.

In the early stage of ileus, then, or during the severe attacks which occasionally occur in cases where a physical obstruction exists at some point in the bowel, diminishing its diameter, antacids will be found beneficial, with the application of a mustard poultice, or fomentations to the abdomen, and the exhibition of enemata. But when the disease is more advanced, other remedies must be adopted in accordance with the symptoms developed. The tobacco injection to mitigate what has been termed spasmodic action of the bowel,—turpentine enema to diminish the flatulent distention—and bleeding to subdue inflammation when it has commenced, have proved of essential importance; and been much insisted on by authors who have written on the subject. In one case which we witnessed during our attendance at the hospital in Edinburgh, when the disease arose from some irritating substance which the patient had taken to open his bowels, and repeated without medical advice; and when all the usual remedies had been tried and failed to afford relief, Dr. Alison succeeded in obtaining an evacuation, after the bowels had

remained obstinately shut for twenty-three days, by bringing the patient's system slightly under the influence of mercury. The case, we believe, was published at the time. But we observed that afterwards the patient was much troubled with flatulent distention of the bowels, and required the constant use of antispasmodics on account of the flatus that was formed. The stools were also smaller than natural, and the bowels retained a great tendency to constipation.

It will be seen that we strongly dissent from the view which has become somewhat popular of late, that ileus depends on inflammation of the muscular coat of the intestines. We have shown, that the disease may commence and proceed to a fatal termination independent of inflammation; and when it arises, it increases the loss of the contractile energy of the bowel, and accelerates the fatal result, and that the real cause of ileus is the retardation of the matters and gas in their passage along the intestinal canal; in consequence of which they react against its walls, enlarge its calibre, weaken and impair its muscular power, and ultimately destroy its functions.

Bowmanville, C. W., 1864.

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*Croton Oil in Neuralgic and Rheumatic Affections.* By S. C. SEWELL, A. M., M.D., Edin., L.R.C.S.E., &c., Ottawa.

Some five and thirty years ago, *tic douloureux*, then rather a novelty to the profession, attracted a good deal of attention, and every possible thing was tried for its alleviation or cure. Among the farrago was croton oil. From the details of the cases this made a great impression on me, but it was not adopted by the profession, and soon dropt out of notice. It was not till the year 1843, that a very bad case of *tic* came under my care in the Montreal General Hospital. The man was aged forty-five, had been afflicted for several years, and latterly his sufferings were almost continuous. I tried acupuncture, iron, and other remedies then in vogue, without success. I then had recourse to croton oil with most marked benefit, which was increased by the local application of carbonate of lead. In a few days, he left the hospital well, and continued so for nearly a year. He was always able to cut short the attacks by using the same means. I afterwards employed croton oil in other neuralgiæ with most gratifying results. Here are two cases of sciatica selected at random to shew the rapidity with which relief is afforded. In January 1853, was sent for to Sandpoint to see Mr. A. M., aged fifty-six. He was suffering under fearful sciatica. The history of the case was that he had had five or six attacks, and had never experienced any relief un-

der a fortnight or three weeks. I gave two minims of croton oil. The bowels were acted on with progressive relief to the pain, after every evacuation, the lancinating stabs diminished in intensity, and in seven hours there was only a slight dull pain between the sacrum and femur, and he was able to walk about. He got three quarters of a grain of muriate of morphia repeated for two or three nights, no farther treatment being required. He was ordered pills of croton oil and ext. coloc. comp., half a drop in each dose to take when another attack came on. He was thus enabled to cut short the attacks for years, and has now been free from them for three or four years.

Case No. 2. October 4th, 1864, at 5 a.m., was called to see Mr. H. M., who had sciatica of the left nerve. Had been ill for three weeks, said: "*that he had tried everything*" and was suffering worse than ever. He was lying on his right side, and could only turn his head a little to speak to me, and even that motion brought on a paroxysm sometimes. I ordered two drops of croton oil, which operated very copiously: at five that evening he was free from pain, got out of bed for the first time for three weeks, dressed himself, spent the evening with his family, and walked up and down stairs as well as ever he did in his life. After three or four days, the pain returned, but in nothing like the same intensity: the after treatment was in order as follows, turpentine, iron, iodide of potassium—the hot summer change of air; and, by the advice of a physician in New York, enemata of ext. belladonnæ at bed-time. In these and all other cases of neuralgia and rheumatism, where I have used this remedy, there is always a most extraordinary quantity of black fæces evacuated accompanied by very severe tormina. If the dose be repeated in two or three days, the evacuations will be natural and the tormina trifling. As these black stools always occur even if the patients have already taken Cooper's pills, calomel and jalap, or other drastics before my arrival, I am led to believe that there is some connection between most neuralgiæ and an impacted state of the saccula or valvulæ conniventes of the colon, otherwise it is impossible to explain where all these black fæces come from, and the relief to the neuralgic pain *pari passu* with the progress of the evacuation. That croton oil exerts a specific action over neuralgiæ is probable from the following experiments made on two cases of sciatica. I selected elaterium as being the purgative most analogous in its ostensible operation to croton oil, but the evacuations were attended by no relief to the pain. Half a minim of the latter given after the exhaustion produced by the former was over, gave the desired ease. There are certain forms of neuralgia almost wholly confined to women, although sometimes

effeminate men and onanists are afflicted with them. These are neuralgia affecting portions of the fifth pair of nerves, and always associated with oligaemia more or less pronounced. The principal seats are half the scalp or hemicrania, the vertex, the exit of the three branches of the fifth nerve upon the face, the frontal and supra-maxillary exits being more commonly the seats of pain. It must be first ascertained whether a diseased tooth be the cause of pain, or whether there be suspicion of malarial taint, one will require the dentist, the other arsenic, &c. There being no suspicion of either, we have to observe whether the paroxysm be attended by local congestion indicated by slight heat and redness over the affected nerve. If so. then muriate of ammonia gives speedy relief, to be followed by constitutional treatment such as iron, porter, exercise and the shower bath. Should there be no local congestion, then chloroform, aconitine or atropine, applied externally or entropically, give ease, as does tr. belladonnæ internally, the constitutional resources, being manganese and iron combined, quinine, exercise, sea-bathing, &c. But even in these cases we sometimes derive benefit from croton oil, where there is habitual constipation, or scanty blackish liquid stools, which often are present, when the bowels are loaded with fæces. In these cases, I give one quarter minim croton oil combined with ten grs. of pil rhei co. The following is an instructive case being one of malarious neuralgia. On the 10th January, 1864, I was called to see Mr. J——H——, at 7 a.m. For nine days he had been seized every morning with severe neuralgia of the right frontal nerve. At first it began at seven a.m., but each morning it began earlier, and this day had awakened him at five o'clock. It always went off at one p.m. I ascertained that at the age of three years he had had an attack of fever and ague, and was still residing on the same farm, he now being twenty-eight years old. The place had formerly been much afflicted with intermittent. I gave him a drop of croton oil, which operated in half an hour; the pain immediately ceased: keeping the malarious cause in view, I ordered a scruple of quinine to be taken at bed-time. The pain never returned. I afterwards extended the use of this remedy to chronic rheumatism, which I divide as follows:

1st. Where the minute ramifications of the nerves supplying the muscles, and more particularly the terminal nervous loops, are the seat of disease. In this form the pain is constant and relieved by heat; it is a true neuralgia.

2. Where the muscular fibres are the seat of inflammation; when uncomplicated with the former, pain is only felt during motion or on pressure. The sterno-mastoid, the deltoid and the deep lumbar muscles are

the most common seats of this form. It is alleviated by heat, and stimulating embrocations.

3. Where the periosteum and fibrous insertions of the muscles are at fault. Here the pain is deep-seated, affects principally the long bones, and is aggravated by heat, being worse when warm in bed. When the case has continued any length of time, the periosteum of the affected parts is always found thickened. I believe these cases never occur except where there is a mercurial, a syphilitic or a mercurio-syphilitic taint: these are amenable to iodide of potassium, biniodide of mercury, guiac. sulphur, ginger, medicated baths, &c.

4. Where two or more of the above forms exist together.

The first second and fourth forms are all benefited by the use of croton oil; the formula I usually employ is the following: ℞ ol. tiglii m ij. ext. colo. co. ʒ ij. M ft massula in pillulas xij. dividenda, sig. sumat i. vel. ij. vel. iij. p. r. n.

The first form being purely neuralgia, needs not to be illustrated by any cases; but it may be doubted by many whether the second form is equally benefited. I shall give a case. On the 20th July, 1860, 7 a. m. called on Mrs. W., æt. 22, who had been suffering for three days with "*crick in the neck*," which had continually augmented in intensity. The sterno-mastoid was alightly swollen, painful on pressure, and the slightest movement or even a person walking heavily across the floor, caused intense agony. This was without doubt a case of pure muscular rheumatism, I ordered a hot pediluvium and a liniment of equal parts of Fleming's tr. of aconite and laudanum with a little soap. An hour after, her husband came to me, and said that his wife could not stand the pain, and that something more must be done. I ordered two minims of croton oil, which she got at 9 o'clock. At 2 p. m. the pain was entirely gone. Pleurodynia is a good example of the mixed form, 1 or 2 being predominant. Commonly a hot foot-bath, fifteen grs. of Dover's powder, with or without a mustard plaster will remove the complaint in a few hours. Some cases however are more rebellious; these can be speedily cured in a few hours by the remedy in question.

In acute rheumatism, both fibrous and articular, I have fancied that it diminished the pain, and shortened the disease; but many careful observations are needed to establish its value in a disease whose treatment is still a matter of such discussion, that many doubt the utility of any mode of treatment.

It is to be remarked that the use of croton oil does not always or even generally exclude other treatment. If in a case of sciatica it be resolved to follow up the treatment, by oil of turpentine, time must be given to

allow the liquor sanguinis to re-accumulate, else one drachm will produce severe strangury.

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*Case of Puerperal Convulsions.* Recovery. By HAMNET HILL, M.R.C.S.E., Ottawa.

My services were sought on the evening of September 13th, 1864, to visit Mrs. B., wife of a market gardener, residing about four miles from the city of Ottawa, who was represented to me as being in labor with her first child. On arriving at her house about 8 p.m., I found the family in the greatest confusion and consternation from the fact that Mrs. B. had been in almost constant fits of convulsions since midday or thereabouts, which were momentarily expected to terminate in death. The patient had hardly been conscious since the first recurrence of the fits; and when I arrived she was just recovering from the convulsive stage of the last one, but entirely without intelligence or any kind of consciousness whatever: the breathing was stertorous; frothy saliva was issuing from the mouth; the lips were of a leaden color; muscular system in a relaxed state; heart beating very powerfully; pupils much dilated; eyes staring vacantly; surface and extremities of natural warmth. She was thirty-seven years of age and about twelve months married. This was, of course, her first pregnancy; had enjoyed uninterrupted good health until now and was stout and robust. I was informed by her friends that so late as 10 a.m. she was occupied about the house with her usual domestic avocations, when she complained of indistinct vision; this feeling rapidly increased to total blindness, which was almost immediately succeeded by a very violent attack of convulsions. A physician residing nearer than myself was sent for, who, very properly, bled her from the arm; after his departure, during the convulsive paroxysms, the vein had frequently commenced bleeding again, evidence of which was to be found in the bandages around the arm and on the bedclothes; no benefit arising from the bleeding, the fits continuing every twenty or thirty minutes, further advice was sought from the medical attendant who sent back an antispasmodic mixture of valerian, castor, &c., with directions for its occasional administration, as there was nothing else he could do for her.

Having ascertained that the patient had arrived at full term and thinking that immediate delivery, if practicable, was of the utmost consequence to arrest these frightful attacks, I made an examination, *per vaginam*, and found the efforts of nature to perfect parturition were luckily so far advanced that the child's head was pretty low down in the pelvis; so without a moment's delay, I began to prepare for delivery with the forceps;

before I could get grease, &c., ready, another dreadful fit occurred: so soon, however, as I could get the patient into any sort of available position, I adapted the forceps and with much difficulty succeeded in bringing a living child into the world; the placenta came away after about the usual delay and with the ordinary amount of hemorrhage; in the meantime as the distressing appearances (with exception of returning consciousness) had, to a great extent, subsided, I fondly hoped that the worst was over; my anticipations were not realized, except for about a period of three quarters of an hour after the birth of the child. The countenance that had become tranquil suddenly became distorted, the eyes commenced rolling frightfully, and all the phenomena of puerperal convulsions were quickly redeveloped. So soon as quietude was resumed sinapisms were applied to the legs, some of the antispasmodic mixture was also administered two or three times, with much difficulty, as dysphagia existed to a very great extent, and only a very limited recovery from this state took place ere the convulsive phenomena were again and again developed threatening to finish her career at each successive attack. Under this state of things I obtained some boiling water into which I dipped a pair of worsted socks and applied them (on the wet moxa principle) up and down the spine from the occiput to about the sixth dorsal vertebra; the patient did not even wince during this otherwise very painful operation; over this blistered surface I applied a strip of emplast. cantha rides to keep up external irritation; two fits occurred after this application, but the attendants described all of those occurring subsequent to delivery as shorter and less severe than those previously occurring.

It occurred to me that the only remaining chance was to endeavor without loss of time to lessen the susceptibility of the nervous centres by the administration of a sedative; and, immediately after the last convulsive stage was over, but with the existence of stertor, I gave her thirty drops of laudanum in a teaspoonful of water, getting it down a few drops at a time; under the most favorable circumstances I certainly expected at least one recurrence of the convulsive attacks, but, at the end of half an hour, uneasiness and slight moaning were the only appreciable results, whether from pain of the neck or whether from the system as it were laboring with its conservative attempts to ward off another threatened attack, I could not say; but about one o'clock a.m., I threw myself down on the floor at her bedside, soon fell asleep, and the patient was not long in following my example. I awoke about 6 a.m., arose to see how matters were progressing; there had been no more fits, consciousness and intelligence were perfectly restored, the sole complaint was of the soreness of the neck, and the impossibility of making her understand that she

was the mother of a bouncing girl to whom I introduced her before my departure. Quietude was enjoined, and convalescence was uninterrupted and rapid.

### Remarks.

All authors, and in fact all practitioners, agree in opinion as to the dreaded nature of cases of puerperal convulsions. Luckily they are not of very common occurrence; the statistics of frequency differing however, very much in the recorded observations of practitioners who have devoted themselves to the obstetric art as a specialty; to so great an extent does this variation occur that Dr. Cusack gives the average as one in seventy, whilst of 38,000 cases recorded by Madame Lachapelle one in 600 was the order of frequency, and Madame Boivin quotes from 20,000 cases one in 1000 or thereabouts; these anomalies are of course irreconcilable: taking, however a very large number of cases together, the frequency appears to be about one in 600 or thereabouts, so that persons in ordinary practice are not likely to see very many cases. The most common period of utero-gestation in which convulsions are likely to occur is during the last month of pregnancy, or in the first stage of labor previous to dilatation of the os-uteri, although instances are on record of the disease shewing itself at all intervening periods from shortly after conception to seven days subsequent to delivery, but observation would tend to show primiparæ and more particularly short, florid, and robust females are more frequently the subject of the disease than those of slim and delicate build.

The last remarks particularly refer to the case in point, which is peculiarly instructive as the convulsive phenomena were developed before the os-uteri was dilated, in all probability, or at all events before any symptoms of labor set in, so far as unskilled attendants could observe, and therefore clearly points to the nervous system as being in an exalted state of excitability, rather than to the state of congestion such as might have happened after great bodily exertion consequent on long-continued parturient efforts when the labor is somewhat lingering; and it is more than probable that cases of a similar nature to that I have recorded, would be little likely to be benefited by bleeding, though it was most certainly warranted, as the patient was strong and plethoric. What then shall be our treatment during labor? I think there can be no two opinions practically about the matter; *i. e.*, that so soon as delivery can be effected not a moment is to be lost in hastening that natural action, either by the forceps or turning, as we can hardly expect the disease to be checked so long as the fœtus is unexpelled under any treatment. With respect to the use of antispasmodics, I should be inclined to think that

during labor, little if any benefit would be expected; after labor they may or may not be of use: it is probable that they would at this day be looked upon more in the light of "a placebo," except in cases of hysterical convulsions, where they would be doubtless indicated. Bleeding, under certain circumstances, more particularly with due regard to the inception of the disease and habit of the patients has been highly and deservedly extolled; but my own practical experience would lead me to attach much value to the immediate vesication of the spine or upper portion thereof by the hot water moxa, should convulsions continue after delivery of child and placenta; this is the second very alarming case in which I have availed myself of this plan of treatment with most gratifying results; and I certainly credited the benefit to the very heroic application of counter-irritation to the cerebro-spinal system; it will therefore be for myself and others to give this treatment a trial in cases of a similar nature, whereby a more extended observation will show its merits or its uselessness.

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*Case of Extra-Uterine Gestation.* By P. R. SHAVER, M.D., Stratford, C. W., Graduate of the University of McGill College, Montreal.

In June last I received a message to attend a poor woman in an adjoining county, who had been confined to her couch for about a month. Upon examination, I found the abdomen distended almost to bursting, and as hard as a board. The history of the case, as far as could be ascertained, was, that the unfortunate woman had had two living children, and one or two premature births. Her present condition was as follows: She had not menstruated for about five months. Had noticed the enlargement of the abdomen to be gradual, until the last four weeks, at which period she could not pass any water; and from that time the belly became enormously distended, and the urine passed away drop by drop. She had a frail ill-nourished body, and her system was much prostrated. On examining the abdomen with the stethoscope, as well as by percussion, could detect no fœtal sound, but readily recognised fluctuation. *Per vaginam* examination revealed a large tumor in the vagina pressing strongly against the rectum. Could not find the os uteri with the finger or the speculum. I then introduced the catheter,—having first satisfied myself that the enlargement of the abdomen was owing to the distended bladder,—and drew off a *gallon* of nasty, stinking urine. The bladder was perfectly paralysed. I endeavored a second time to find the os uteri, and as signally failed. I then administered chloroform, passed my hand into the vagina, pushed it far up into the pelvis; and

there, far above the arch of the pubis, I for the first time felt the os in a rigid, hard, and non-gravid condition. I then informed the friends that the case was one of retroversion of the uterus, producing retention of urine, with constipation of the bowels. The following day I had the patient removed into town, a distance of about fifteen miles, on a bed, thinking I might possibly restore the paralysed condition of the muscular coat of the bladder, by removing the urine two or three times daily; and as gestation progressed, the uterus might possibly rectify its own malposition. A day or two after her admission, a messenger came into my office, saying the woman was dying. Upon my arrival, I found abdominal bearing down pains, but no uterine propulsive power. Upon examination under chloroform, I found the os still in its former locality, above the arch of the pubes, and still in its rigid, undilated condition. The fruitless attempts at bearing down, which could not be resisted by the patient, continued for about an hour, and the tumor in the vagina making some progress towards the os externum. I saw the woman was getting pale, faint, and restless, with a constant desire to get out of bed.

The patient was evidently sinking, whereupon I immediately sent for Dr. Hyde in consultation; and when that gentleman arrived and made an examination, he was equally as much in the dark as myself. The tumor had now become nearly parallel with the fourchette; and during an examination being made by Dr. Hyde, it gave way, and a fœtus of about five months' gestation, dropped into his hand, alive, which died in five minutes after expulsion. The hemorrhage was frightful. I immediately passed my hand up through the rent, which, of course, I thought was in the uterus, and pealed off as well as I could the placenta. The woman was dead in ten minutes. The question for my friend Dr. Hyde and myself to determine was, whether this was a case of ruptured uterus? The husband, next day, in a most praiseworthy manner permitted a *post mortem* examination of the body; but for which the case would have remained in total obscurity.

*Sectio cadaveris.*—The body was pale, blanched, and perfectly bloodless. Upon opening the abdomen, we found the pelvis filled with coagulated blood. The uterus was empty, in a non-gravid condition, and perfectly retroverted: the fundus in the lower strait, and the os and cervix above the arch of the pubis. The left fallopian tube and ovary were normal. The right *fallopian tube* was enormously hypertrophied, and had during life contained the fœtus. Portions of the placenta and membranes were still adherent to the tube. The tumor which we had felt during life, was the right fallopian tube, and had passed down into the pelvis as far as was practicable, and had then given way, rupturing the

vagina at its union with the rectum, the child thus making its escape into the world *via naturalis.*

I have made a beautiful preparation of the whole organs engaged in this unique and unhappy case, and at some future period shall have much pleasure in presenting the specimen to my *alma mater*, the University of McGill College, Montreal.

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# PERISCOPIC DEPARTMENT.

## Surgery.

### ON THE ARSENIC-EATERS OF STYRIA.

By CRAIG MACLAGAN, M.D., Edinburgh.

In the spring of this year, at the conclusion of a short residence in Vienna, I resolved to visit Italy, and finding that my route led me through Styria, I thought it might be interesting to endeavor, by personal inquiry, to gain some information as to the reputed arsenic-eaters of that country; and as my travelling companion, Dr. Joseph Rutter of London, was also professionally interested in the question of their existence, we determined to make a short stay at Gratz, the capital of the duchy, and thence to make any excursions into the country, which the knowledge I might acquire should point out as necessary.

My object in the present paper is succinctly to narrate what I learned by actual observation; but before doing so I may be permitted to glance rapidly at the existing condition of our information on the subject.

Although medico-legal observations on this practice had already been made so early as between 1817 and 1820 (Professor Schallgruber, *Medecin-Jahrbuch des Oestreich Staates*, 1822) in Gratz, the first time that any great interest was manifested in Britain on the subject seems to have been when a paper by Dr. Von Tschudi, which had originally been published in one of the Viennese medical journals (*Wiener Medicinische Wochenschrift*, October 11, 1851), appeared in an English dress, and found its way into many of the popular as well as scientific publications of the time, including Chambers' Journal, and the late Professor Johnston of Durham's Chemistry of Common Life.

The embellishments which Von Tschudi's narrative received from other writers, as well as the apparently incredible nature of the original statement, caused it to become a subject of much discussion. The general opinion of scientific men in this country was, that the statements of Von Tschudi were not worthy of belief, and this view of the subject

was specially maintained by Mr. Kesteven, of London, in a series of papers which appeared in the Association Medical Journal for 1856, in which he quotes the opinions of the most celebrated toxicologists of the time, in confirmation of his own disbelief of the practice.

Careful inquiry, however was set on foot by other scientific men, both British and Austrian. Mr. Heisch, of the Middlesex Hospital, having put himself in communication with persons living in the districts where the practice existed, was enabled to quote several very interesting cases, which were very thoroughly authenticated (*Pharmaceutical Journal*, 1859–60, p. 556), and Dr. Von Vest, the Landesmedicinalrath for Styria, residing in Gratz, having issued a circular to the medical men in his district, asking for information on the subject, was enabled also to arrive at tolerably satisfactory proof of the existence of the custom. The most interesting example of it was communicated to him by Dr. Knappe, then residing at Obertzeiring, in Upper Styria, who had persuaded an "arsenikophagite" to come and live under his observation for a few days, and who not only was thus enabled to see the man take his dose, but was enabled to transmit to Dr. Schäfer, a practical chemist in the Styrian capital, a specimen of the urine passed after the ingestion of the drug, and which was proved to contain it.

The facts ascertained by Knappe were made known in Britain, by a paper by Dr. Roscoe, read to the Manchester Philosophical Society, and published in the Mechanics' Magazine; and the existence of the practice has been admitted by some scientific men who have written since the date of Roscoe's paper. Dr. Guy (*Forensic Medcine*, 2d Edit., p. 368), admits that Roscoe has brought forward "conclusive evidence" of the fact; but from its being denounced as incredible in most of our standard works which have occasion to treat of the subject, such as those of Taylor and Pereira, and from its having been strongly denied in some important criminal trials, as by Dr. Christison in the case of Wooler (*Edinburgh Monthly Journal*, 1855–56, pp. 709, 710); whilst Roscoe's valuable paper appears not to be sufficiently known, it seems to me the general belief in this country that there is no foundation in fact for the alleged arsenic-eating in Styria.

What seemed to result from the inquiries of Von Tschudi, Knappe, and Heisch, was this:—

I. That in various parts of Styria and the adjoining countries certain individuals were in the habit of swallowing daily, or twice or thrice a week, or at longer intervals, a certain quantity of a mineral substance,

called "*Huttereich*,"* for various purposes such as the improvement of the appearance, the rendering more easy the respiration during mountain climbing, as a condiment, as a tonic and stimulant, as a prophylactic against disease, and as a preservative of health; and that this so called Huttereich was arsenic.

II. That these individuals became, through custom, capable of taking doses of arsenic varying from one grain to several grains daily.

III. That its more immediate effect on the system was to make them lively, combative, and of strong sexual desire. This latter physiological effect may perhaps be held to be indirectly proved by the inordinate number of illegitimate children in some of these places, the proportion sometimes rising nearly as high as 60 per cent. of the total births.

Against all this was to be placed—

I. The experience of medical men in other countries, who have found that by the continued use of arsenic as a drug, even in fractional parts of a grain, certain consequences arose directly contrary to those experienced by the partakers of it in Styria.

II. The want of proof by analysis that the substance said to be taken was really arsenic; the absence of any chemical examination of the excretions of an arsenic eater, so as to prove that arsenic really had been swallowed; the want of any accounts of its effects when first begun to be used; or of any information as to the origin of the custom.

Most of these objections, however, have been removed by the investigations of Drs. Knappe and Heisch, to the former of whom I am indebted for much interesting information on the subject.

It is not at all surprising that in other countries there should be a prevalent impression of the non-existence of this practice in Styria, seeing that in Austria itself those who have not made special inquiries on the subject are generally sceptical as to it. Any one, therefore, passing through Austria and making casual inquiries, would most likely be told that the practice of arsenic-eating was not generally known or believed in. It is not difficult to account for this. The people who eat arsenic have the idea that it is regarded as a bad habit, and therefore one to be concealed as much as possible, just like opium-eating in this country; and they have the additional reason for concealing the practice, that from the strictness of the laws regarding the sale of poisons, they cannot get the arsenic by open purchase, as the opium eater in this country can

* I use the spelling adopted by Dr. Macher in his Medizinisch-statistische Topografie Steiermarks. Although the pronunciation of the Styrians makes it Hütrach, it is obvious that the word really is Hütten-rauch—literally, furnace smoke or vapor.

get his laudanum, and therefore they are generally obliged to purchase it from illicit dealers.

I now proceed to narrate what I have myself ascertained by personal observation. Though without an introduction to him, I called on the Medicinalrath, Dr. Von Vest, who, on learning the object of my visit, with great courtesy put at my command any papers that his office contained, and, in addition, supplied me with introductions to Drs. Knappe, Machar, and Tingler, the two former of whom I was fortunate enough to see, but I was unable to spare time to see Dr. Tingler.

Dr. Machar, now resident at Stainz, who is thoroughly acquainted with all the medical matters of Styria, and whose experience during a long period of active professional work there, makes his opinion of no small value, informed me, that, although cognizant of the existence of the practice, he had little personal experience in the matter. He related to me, however, one case, in which a woman who had been tried for poisoning her husband with arsenic, had been acquitted, from "want of evidence," the plea for the defence being that the man had been an arsenic-eater. Though this defence was generally believed to be false, it shows, at all events, that the practice has in a court of justice been admitted to exist, and has served, in at least one instance, as a successful ground of defence.

Dr. Knappe, of Liegist, in Middle Styria, an hour's journey from Gratz, was my next informant; and when I first spoke with him of the case of J. W., already alluded to as the subject of experiment, and whose urine had been examined by Dr. Schafer, he described him as a small, strongly-built man, with a great muscular development, a wood-cutter by trade, who had taken the drug for a period of twelve years. Dr. Knappe further stated to me that while personallyignorant of the actual existence of an arsenic-eater in the neighborhood, he could go with me to Upper Styria, and show me the above man, but he suggested that we should first make inquiry in the village, whether or not any of those persons described to him as indulging in the habit could not be got to take a portion of it before me. I accordingly slept in Liegist that night, and next morning I had the satisfaction, in presence of Dr. Knappe and my companion, Dr. Rutter, of having my first interview with an arsenic-eater.

CASE I.—Mathias Schober, a healthy-looking, fresh complexioned, fairly muscular young man of the age of twenty-six years, and about five feet nine inches in height, a native of Liegist, and employed as a house servant there, said he had taken hüttereich for about a year and a half, not, however, white arsenic, but the yellow arsenic or orpiment, of which he took a specimen from his pocket and showed it to me. Of this I

retained a piece for chemical investigation. He informed me that he took the arsenic in order to keep strong, though he had never suffered from ill health. He said he had never experienced any bad effects, even when he first began using it, that he had at first taken rather less than a grain every fortnight, that he now took it twice a week, and that on omitting to take it for any longer period, he experienced a longing for it, which was relieved by a repetition of the usual dose. His reason for taking the orpiment instead of the white arsenic was, that it was more easily procured; but having professed himself quite indifferent whether it were arsenious acid or the sulphuret, Dr Knappe produced a paper containing the former (of which I also kept a sample), and having asked him to choose out a piece such as he was in the habit of taking, it was weighed and found to be nearly five grains; we had no finer weight than one grain, but the piece of arsenic was much over four, though less than five. Dr. Knappe having carefully ground this to powder on a clean piece of paper, it was transferred to a small piece of plain white bread, about as large as a man's thumbnail, and this the doctor put into his mouth; Schober chewed it and swallowed it, and then swallowed another portion of bread the same size immediately after. This was at 9.30 a.m. He stayed with us a few minutes, but he had to return to his work, promising however, to come back in a short while. This he did at 11.30, two hours after, and made water in my presence to the amount of what I estimated at twenty-eight ounces, into a vessel previously carefully cleaned, and the urine was put into bottles thoroughly washed by myself. Unfortunately, in the hurry of my departure, in trying to pack these bottles into my hat-box, I broke one, and thus lost part of the urine. Since my arrival in this country, I subjected the contents of the two remaining bottles to chemical analysis, adopting the distillation process of Dr. Taylor as the most convenient way of separating arsenic from the organic matters of the urine. For this purpose the urine was carefully evaporated to dryness in a clean retort; the nearly dry residue was covered with strong hydrochloric acid, and distilled into a well-cooled receiver. The product, amounting to about half an ounce, was a clear, feebly pinkish fluid, thirty minims of which, when treated both by Reinsch's and Marsh's process, gave very characteristic arsenical deposits.

Schober also came the following day to see me, having taken no more arsenic since the dose which he had swallowed before me twenty-six hours previously. I again secured some urine which he passed in my presence, and this, when chemically examined as above, also yielded arsenic freely.

CASE II.—Joseph Flecker, æt. 46, a muscular, healthy-looking, clear-

complexioned man, a tailor by occupation, told us that he had taken huttereich, generally the orpiment, for a period of fifteen years. He first began to do so on the occasion of the inhabitants of a house, in the neighborhood where he lived, being attacked with fever; and when fourteen people had died in it, and no one would enter the premises, he determined to do so, and took, as a prophylactic, about one grain of arsenic daily for three successive days, while going to the infected house, and though he said he had not felt quite well at the time, he was unable now to describe specially what had ailed him; but on being asked if he had ever suffered from vomiting or irritation in the stomach, he said he had not.

The day before my interview with him, he twice, viz., at 10.30 and 3 o'clock, had, in the presence of several of the villagers of Liegist, and on one of those occasions in presence of the burgermeister, who informed me that he had seen him do it, taken a piece of the sulphuret of arsenic from his pocket, and scraped off a certain quantity of it on a piece of bread and eaten it. He brought with him a small bottle of his urine, which he stated to have been passed eighteen hours after the last of the two doses, and in which I have since found a considerable quantity of arsenic. The reason which he assigned for this public exhibition of his arsenic-eating capacities was, that it had become the subject of conversation in the village that two strangers had come a very considerable distance to witness an example of arsenic-eating, and inquire into the practice, and that he wished to make open demonstration of his assertion that he was capable of tolerating a considerable dose of arsenic. When he first came to me he seemed somewhat unwilling to take a dose that day, owing to his previous performance, and seemed to fancy it possible that he might have some slight irritation of the stomach, such as a feeling of warmth accompanied by thirst. He did not appear to be able to give any reason for anticipating this result; perhaps he intended it as a gentle hint that the thirst might require assuaging; at all events, having been informed that he should not want the wherewithal to quench it—(he confessed to being by no means abstemious in the matter of alcoholic potations), he, to satisfy our curiosity, picked out a piece of arsenious acid, from the same parcel that had been shown to Schober, and which, on being weighed, was found to be as nearly as possible six grains. This he placed entire on a small piece of bread, and taking it into his mouth, crunched it up audibly, and in about two minutes after swallowed six or seven ounces of cold water, stating that he liked to drink immediately after swallowing a dose, and on such occasions preferred water. I then made him open his mouth and inspected it narrowly, but found it quite

clear of bread crumbs or anything else, thus assuring myself that no jugglery could have been practised. After having swallowed the arsenic four minutes, he eructated slightly, but till he left us, a quarter of an hour after, he had no symptoms of any bad effect. The six grains were taken at 11.30, and at 12.15 he returned, and passed a small quantity of light-colored urine. Nearly the whole of this was bottled for exportation, and the twelve ounces thus secured were treated by the process of distillation above described, and also yielded a characteristic deposit of arsenic.

Flecker gave me the following account of his use of arsenic. He stated that he generally takes about the quantity we saw him swallow once a week, but with variations in the intervals, there being sometimes four days only, sometimes eight days between the doses. That when he has a distance to walk to his work, he takes a larger dose, and is then in good spirits for about eight days. That if he, however, intermits it for fourteen days, he feels stiff in the feet, with general lassitude and a craving for another dose. If his victuals are hard of digestion, he takes a dose to assist the stomach, and if he takes a rather full dose, he brings a good deal of wind off his stomach, but never vomits. He stated that his father had taken arsenic before him, and in considerable quantity, and that in the immediate neighborhood of Liegist numbers use it, several taking it daily, and many in larger doses than he. He said that all who take it are healthy—that he never knew of any one vomiting from its use, and he believed that, like the use of tobacco, if the dose is very gradually diminished, an arsenic-eater can break himself of the habit.

One of the objections which has been made to the acknowledgment of the reality of arsenic-eating is, that the substance swallowed has not been ascertained by chemical examination really to be arsenic. This link in the chain of evidence I am able to supply. The white substance which I saw Schober and Flecker swallow, part of which I have now in my possession, is pure arsenious acid. It sublimes into octohedral crystals, and leaves no appreciable residue. The yellow substance which Schober used is a fair sample of the orpiment of commerce, and contains, as that substance usually does, a considerable portion of free arsenious acid.

I am, of course, not in a position to give any opinion as to the extent to which arsenic-eating prevails in Styria—my time would not have permitted me to enter upon such an inquiry, nor would it be easy to get satisfactory information as to a practice which is generally kept secret; confirmation of the fact of its existence is more interesting to us scientifically than its extent; and that it is a fact, my personal observation enables me confidently to afirm. That arsenic-eating in Styria is a

universal habit, or one indulged in by even a majority of the male peasantry, I do not for a moment suppose; but the averment "that the story of the Styrian arsenic-eaters is not only unsupported by adequate testimony, but is inconsistent, improbable, and utterly incredible"—(Kesteven, *Asn. Med. Journal*, 1856, p. 811); or that these are "absurd and exaggerated statements, utterly inconsistent with all that is known concerning the action of arsenic in this or other countries, and but for the fact that they for a time received the literary support of Professor Johnston, and were diffused by him in an amusing book, they would not have required any serious refutation"—(Taylor, *On Poisons*, 2d Ed., p. 92); or that it is a "mess of absurdity," "a pure fable"—(Christison, *Edin. Med. Journal*, 1855–56, pp. 709, 710), are, although justified by the state of knowledge at the time they were made, no longer tenable; but, on the contrary, we can no longer doubt, to use nearly the words of Roscoe, "that decisive evidence has been brought forward not only to prove that arsenic is well known and widely distributed in Styria, but that it is likewise regularly eaten in quantities usually considered sufficient to cause immediate death."

It is probable that many of the physiological actions attributed to it are fanciful, and that its use is mixed up with a good deal of superstition, as, for example, in the case of the poacher who takes it to give him courage to pursue his depredations on ground that is new to him, or that of the ostler who, in giving it to his horses to improve their coats, thinks that it will have no beneficial effect unless he partakes of it at the same time.

It is evident that the confirmation of the existence of the practice of arsenic-eating must lead us to modify some of the opinions that are entertained with regard to the influence of habit on the action of poisons. It has long been notorious, that by habit the human body may be brought to bear with impunity doses of organic poisons, such as opium, which to those unaccustomed to them, would certainly prove fatal; but "it has hitherto been considered by toxicologists that, except within very narrow limits, habit appears to exercise no influence on the action of mineral poisons"—(Taylor, *On Poisons*, p. 89). Though the experiments of M. Flandin, by which he proved that he could bring dogs to bear fifteen grains of arsenious acid in powder in twenty-four hours without injury to their appetite or health, and the practice of administering arsenic to horses, have long been known as pointing rather in the contrary direction, this has been supposed to be due to some peculiarity in the constitution of the lower animals. The facts which have been ascertained with regard to the Styrian arsenic-eaters, and which the above observations confirm,

entitle us to maintain that the modifying effect of habit is not confined to organic poisons, but extends to those of mineral nature, at all events to arsenic.—*Edinburgh Medical Journal.*

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## NOTES IN MEDICINE AND SURGERY,

By Philip Crampton Smyly, M.D., F.R.C.S.I.; Surgeon to the Meath Hospital, and to the Institution for Sick Children, Pitt-street.

The methods recommended for the treatment of diseases of the larynx and trachea have become so numerous within the last few years, that it is not easy to compare their several advantages. One laryngoscopist advises solutions of various irritants, introduced by means of a brush or syringe specially constructed for the purpose; another blows very fine powders into the cavity; another galvanizes the muscular structures; another pulverizes fluids for inhalation.

All these devices have been called for by the obvious advantages of applying local applications to a diseased surface. Before the laryngoscope brought the lining membrane of the larynx and trachea into view, and revealed many diseases before only guessed at, the practitioner was content with a brush, or sponge on a stick, to apply remedies to the pharynx, or to touch, with nitrate of silver, any ulcerated spot he might see. Now that he can see, in many cases, down to the bifurcation of the bronchial tubes—in almost every case the whole larynx, and a great part of the trachea—he must mount his brush on a long curved stem, he must have his peculiar syringe, his laryngeal galvanizer, his polypus forceps, his écraseur, and his fluid pulverizer.

The object of these notes is to point out some of the advantages peculiar to the last of these—the inhalation of pulverized fluids.

Inhalation is not, by any means, a new idea: vapors have been employed from the earliest times, and air impregnated with various substances suspended in it, has been a remedy of well-known value—*e. g.*, the sea breezes in scrofulous disease. But inhalation of solutions of various medicinal substances, broken into a fine spray, is new, Sales Girons published his first clinical observations in 1857; the diseases in which the inhalations were found beneficial were pharyngitis, laryngitis, bronchitis, tuberculosis, &c. Since then many, both in France and Germany, have followed him, more especially within the last two or three years, and many instruments have been invented to break the fluid into spray. It would be out of place to enter on this extensive subject here, or on the discussion whether the spray, when formed, enters the air-pas-

sages at all or not, and if it does how far it can penetrate into the bronchial tubes. It is, for the present, sufficient to state, that the fluid impregnated with substances not otherwise volatile, can be broken into such fine spray that the solution may be inhaled without inconvenience, and that the medicinal agent may thus be brought in direct contact with the lining membrane of the bronchial tubes, even as far as their small ramifications.

The instrument I use is made by Mr. Krohne, after M. Lewins. It consists of a glass chamber, covered with an air-tight brass cap. In this cap a glass tube is fixed, almost touching the bottom of the glass vessel. The end, outside the brass cap, is drawn out to a capillary opening, and bent at an angle. Into another part of the cap an air-pump is screwed, to press air into the chamber, thus forcing any fluid introduced into the chamber through the capillary opening with very great force. A glass cylinder, open at both ends, and having a small round hole in the side, is fixed by means of a metal rod at a short distance, so that the stream from the capillary opening may enter the hole in the side. Opposite this hole a metal button is fixed, on which the stream strikes, and is broken into a fine spray which falls out of the cylinder at each end. The patient is then placed opposite one end of the glass cylinder, and by breathing draws a considerable portion of the spray into his air passages.

I have employed the pulverized fluid thus formed in several cases, and with very good results, in which I had before been employing other remedies without effect; these I will pass over, and merely give one case in which every other remedy either failed or could not be employed.

Mr. R. consulted me, about the end of June, 1864, complaining of a constant irritation of the throat, preventing sleep, and causing great distress. His throat was so sensitive that the examination with the laryngoscope was very difficult—almost impossible. However, after a time, I got a very good view of the entire larynx. The epiglottis was very red, the mucous membrane betwen the arytenoids and the false cords was congested and slightly excoriated. The vocal cords were quite white, except towards the sides attached to the larynx. I tried to touch the parts with a brush charged with a solution of nitrate of silver, but could not get it past the base of the tongue. I ordered, then, a strong gargle of bromide of ammonium, and to come again in a day or so. A few days after he returned, saying the gargle had done him some good. The examination was not quite so difficult, and I succeeded in passing a brush between the arytenoids. There was very little spasm, but he was attacked with violent vomiting, which continued for three hours; after this he would not allow a brush to be again introduced. He tried seve-

ral gargles, but without any effect, and inhaled the vapor of hot water, &c. He got worse and worse, so that for many nights he had no refreshing sleep. I then told him I had just obtained Lewin's fluid pulverizer, and that I wished to try its effect in his case. The first day he inhaled the spray of a (15 grains to the oz.) solution of nitrate of silver for about ten minutes; after the inhalation he said he felt the whole throat rather sore. Next day he came for a second application; the soreness, after the first, had quite gone off towards evening, and he had slept, without any disturbance from his throat, the whole night. The inhalation was repeated twice. His throat was so much improved that he was able, a few days after, to leave Dublin to travel for pleasure.

October 13th—Mr. R. has not had any return whatever after the second application of the spray of nitrate of silver solution.—*Dublin Quarterly Journal.*

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## GRANULAR SWELLING, OR BENIGN FUNGUS OF THE TESTICLE IN INFANTS.

By Christopher Fleming, M.D., M.R.I.A., &c., &c.

An infant, aged fourteen days, was brought to hospital with acute inflammation of the left testicle. No cause could be assigned for the attack. The health of the child, for its age, appeared to be perfect, and there was no trace of eruption or other disease of any kind. The mother was healthy, and had other children who were healthy; and, from her statement, it would appear that the attack in the child had commenced, some days previous to her application, with fulness and tenderness of the scrotum, and that those symptoms gradually advanced until they reached their present state. Now, the distinctive characters of "acute orchitis" on the left side existed in their most intense form. The scrotum, especially, was very much inflamed, and prominent in front of the testicle, which, with the epididymis, was so much enlarged as to equal the size of a large hen egg, and the chord was painful on pressure and much thickened. In the progress of the case there was considerable urinary irritation, at one time amounting to retention of urine, which required the introduction of a catheter. Treatment was adopted suited to the age of the child, but the mother could not remain in hospital. She attended from day to day for dispensary advice. Her poverty and condition, however, did not enable her to carry fully out the directions given her, when, at the end of a week, a slough presented itself on the thinnest and most prominent portion of the swelling of the scrotum. This slough was, in a short time, detached, when a granular growth pro-

truded through the opening, increased to about the size of a large nut, and ultimately assumed all the characters of the ordinary "granular swelling of the testicle." This disappeared under treatment, and, when the child was at last brought to hospital, the scrotum, the testicle, and the chord were gradually assuming their normal characters, and the ulcerated surface was contracted and cicatrizing. (A drawing of the appearances in the earlier and in the granular stage of this case has been taken by Mr. Connolly, and is now in the museum of the hospital.)

Diseases of the testicle, of the spermatic cord, and of the scrotum, are by no means of rare occurrence in the infant and child. Numerous instances pass under my observation. Limiting my present remarks, however, to the subject of "orchitis" at those periods of life, I would say, that seldom or ever a month passes over without my witnessing one or more of such class of case in its acute or chronic form, and involving one or both testicles. The above case is deserving of record, as well on account of the early age of the child, as of the rapid progress, and peculiar termination of the case itself. In child or in adult "acute orchitis" seldom terminates in even a disposition to "granular swelling"—it is rather the exception than the rule that suppuration takes place; and when so, the reparative processes are too quickly accomplished to admit of that morbid growth.

In the majority of instances of "chronic orchitis," an induration of the body of the testicle, and of the epididymis, as in the adult, continues for a variable time, and gradually subsides under treatment—in others, again, this hardness is accompanied by effusion into the cavity of the tunica vaginalis, just as in the adult, constituting what has been termed hydrosarcocele, which also disappears under treatment—whilst, in a third class of cases, suppuration will equally supervene, will pass through stages familiar to all practical surgeons, but will not end in the "granular swelling of the testicle," unless from great local neglect. Indeed, when we bear in mind the anatomical character of the disease, it is quite intelligible that much care is required in their local management. All undue pressure should be avoided, especially in their inflammatory stages, and thus the integrity of the delicate structure of the scrotum on the one hand, and that of the investments of the testicle on the other, will be protected. Destruction of a greater or less portion of the scrotum must otherwise ensue in the first instance, whilst in the second a fungus, merely *superficial*, may be converted into that *deep* form, in which the proper tissue of an important organ is necessarily involved.—*Dublin Quarterly Journal.*

# Canada Medical Journal.

MONTREAL, DECEMBER, 1864.

In the last number of this periodical we referred to the great necessity there exists for the appointment of an officer of health for our city; and although the article in question was reproduced in several of our leading daily papers, yet so far no notice has been taken of the suggestion by our city authorities.

It is to be regretted that such apathy exists; and it is far from encouraging to us that the warning, which all must allow was well meant, and of the force and necessity of which all will admit, is permitted to sink into forgetfulness as an idle tale, or one unnecessary because of being unpalatable. Have we facts to bear out the views already made public in the columns of this journal? Is it a fact that the mortality of Montreal is greater in proportion than any other city of its size on the world's surface which enjoys equal physical advantages? Is it a fact that each year we send for burial hundreds of individuals, who, under more favorable circumstances, would be spared to become of use, and add to the importance of our community? Is it a fact that pulmonary consumption and all diseases of the lungs, are with us of more frequent occurrence than formerly, an increase greater in proportion to our increased population? Is it a fact that disease in its most loathsome form is of more common occurrence, (we refer to small-pox), making no distinction of persons, entering alike the houses of wealth, comfort, and luxury, as of those where filth, squalor, and poverty reign supreme? These are questions we would ask our fellow-citizens; and if they seek the remedy, we are equally ready to reply. If our corporation have not the power already, let them go to the legislature of the country and obtain it. "A Nuisance Removal, and Disease Prevention Act," one similar to the act bearing the above appellation and at present in full force in Great Britain, is much required in Canada. By the provisions of that act, the officer of health can look into all things which are liable to affect the sanitary condition of houses, localities, or even individuals, and if need be, proceed summarily against all offenders. Over-crowding, the most fruitful source of disease, is specially looked into. It has but

recently been held by the magistrates of London that 500 cubic feet of breathing space is necessary for each adult, and 300 cubic feet for each child under ten years of age, and that all premises affording less than this amount, are injurious to health. Now what has been the result of all these stringent sanitary measures? London before the inauguration of the present system, registered an annual loss of forty individuals for every 1000 of its inhabitants. The present annual death-rate is twenty-three per 1000 with a prospect of steady decrease. In Montreal our present annual death rate is about thirty-four per 1000; while the country districts average from seven to nine per 1000. We cannot see why the rate could not be very much reduced by careful inspection and the adoption of strict sanitary measures. We have been told to wait and see the results of the improved drainage which is being developed. We freely admit that much benefit will result, but this will only be a temporary lull. Let no man imagine that the office of health inspector is a sinecure. Work has to be done, much judgment is required, weekly reports have to be drawn out, mortality bills have to be consulted, and localities have to be inspected. The officer of health to be of any use to a community must be a working man, and as such he deserves to be well remunerated for his work. If he is a drone, and knows nothing of the details of his duty, the city would be better without his services. We must again press this matter on the serious consideration of our citizens, and again advise a careful investigation into the many necessary sanitary reforms needed.

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## MONTREAL GENERAL HOSPITAL.

We feel sure that many of our readers take an interest in this noble charity of which our rapidly increasing city has every reason to be proud; and we therefore avail ourselves of the receipt of its forty-second annual report, to glean from it a few particulars, concerning its operations during the past year. The total receipts from all quarters were $15,534.63. On looking into the sources from which this revenue was derived we find that the large sum of $1,342.81 was from pay patients, and that students' fees gave $338.51. The expenditure was $15,040.05, and the total number of persons, who participated in its benefits was 8940, of whom 1291 were admitted into Hospital, and 7649 were treated as out-door patients. Of those admitted, 1122 were cured or relieved, and 65 died, and at the date of report 104 were in hospital. The great prevalence of small-pox, last winter, has brought the committee of management to see the absolute necessity which exists for the erection of a separate building for the accommodation of persons suffering from this loathsome disease.

and they strongly recommend that such a building be erected. We need hardly add our testimony to that of the committee of management: they feel its necessity—so do we—and we sincerely hope that another year will not pass away ere we see such a building being erected. Thus far, however, we have not heard of any further action having been taken in the matter. Within the last few years a number of very great improvements have been made in the internal arrangements of the building, which have not only greatly contributed to the comfort of its unfortunate inmates, but in a sanitary point, have been invaluable. As we write a new surgery has just been completed, in the centre of the building, which contains every convenience to be desired, and the old one fronting on St. Dominique street, will of course be closed. While upon the subject, we would earnestly call the attention of the committee of management to what has been for years a crying grievance, and one which we wonder the attending physicians have not sought to have remedied long since. We allude to the room used for an operating theatre, which is totally unfit for the purpose it is intended to serve. It has been our good fortune to visit many of the operating theatres of American hospitals, and almost every operating theatre in all the leading cities of Great Britain, and they are so constituted, the light being entirely from above (much the same as a photographist's room), so that the operations are performed facing the students. The room at the Montreal General Hospital receives but little light from the semi-sky-light; the principal light being given from a window opposite the operating table, the result of which is that all operations are performed facing this window, and *away* from the students. During the session of the University of McGill College where over a hundred students are usually present at operations, so far from gaining any practical information from being present, the majority would learn more by studying in their own rooms. The students now contribute a good sum (last year $338.51) yearly to the hospital, and their just claims should be promptly met. In our last, we published a letter signed "Several Medical Students," calling our attention to the matter, and we feel they have good ground for complaint. We are confident that now we have fairly brought this matter before the committee of management, they will, as promptly as is in their power, apply the proper remedy. We cannot close this notice without bearing testimony to the unwearied exertions of the managing committee, for the welfare of the institution, principal among whom is Thomas Morland, Esq., to whom, in a great measure, are due many of the recent improvements and alterations.

## THE MONTREAL DISPENSARY.

A special general meeting of this corporation, called by requisition, was held at the institution, Fortification lane, on Monday afternoon. The following members were present: W. Workman, Esq., President, in the chair; Rev. E. Wood, M.A.; G. H. Frothingham; Dr. Fenwick; A. West; T. A. Evans; L. N. Duvernay; S. C. Bagg; P. D. Browne; J. S. Hunter; and A. N. Rennie, Esq., Secretary.

The Chairman having called upon the Secretary to read the requisition, and the advertisement convening the meeting, Dr. Fenwick placed in his hands the formal resignation of Dr. R. P Howard, one of the attending physicians. Dr. Fenwick also read applications from the following candidates—for the vacancy created thereby, and also that caused by the death of Dr. T. W. Jones—Drs. G. P. Girdwood, Lemire, John H. Pickup, W. W. Squire, E. H. Trenholme, J. P. Rottot, and W. E. Bessey.

The meeting having proceeded to ballot for the candidates, the scrutineers, Messrs. Bagg and Browne, returned as elected Dr. Girdwood and Dr. Squire.

The Chairman announced that the next business was to elect six consulting physicians, when the following were unanimously appointed: A. Hall, M.D.; W. Wright, M.D.; R. P. Howard, M.D.; J. P. Rottot, M.D.; and J. L. Leprohon, M.D.

On motion of J. S. Hunter, Esq., seconded by S. C. Bagg, Esq., Dr. G. E. Fenwick was unanimously elected Vice-President of the Institution.

A vote of thanks having been passed to the Chairman, the meeting broke up.

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We are pleased to learn that the vacancy in the staff of attending physicians of the Montreal General Hospital, created by the recent death of the late lamented Dr. Jones, has been filled by the appointment of George Edgeworth Fenwick, Esq., M.D.

Having been for the last seventeen years engaged in general practice, and having occupied the chair of Materia Medica in the St. Lawrence School of Medicine, and being at present the Demonstrator of Anatomy in McGill University, and co-Editor of the *Canada Medical Journal*, he is certainly entitled to the honor the Governors of the Hospital have conferred upon him. Such of his colleagues as have been brought into personal contact with him at the bedside, and have had an opportunity of procuring an opinion from him as a practitioner, can testify to the soundness of his judgment and the skill of his hands. His unassuming gentlemanly deportment and honorable feelings are known to all his confrères.—*Communicated.*

# ABSTRACT OF METEOROLOGICAL OBSERVATIONS,

*Taken at the Montreal Observatory, Latitude* 45° 31′ *N. Longitude,* 4*h.* 54*m.* 11*s. W. of Greenwich. Height above level of the Sea* 182 *feet. For the month of October,* 1864.

BY CHARLES SMALLWOOD, M.D., LL.D., D.C.L.

| Day of Month. | Reading of the Barometer, corrected, and reduced to 32° F. | | | Reading of Thermometer. | | | Mean Tension of Vapor. | Mean Humidity of the Atmosphere. | General direction of Wind. | Horizontal movement in 24hours in miles. | Mean extent of Clouds in 10ths. | Depth of Rain in inches. | Depth of Snow in inches. | Ozone in 10ths. | Weather, &c. | Remarks for the Month. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Highest | Lowest. | Mean. | Max. | Min. | Mean | | | | | | | | | | |
| | Inches. | Inches. | Inches. | | | | | | | | | | | | | |
| 1 | 30.200 | 30.139 | 30.179 | 66.1 | 36.7 | 52.5 | .369 | .869 | W | 152.40 | 3.6 | .... | .... | 1.0 | | Barometer .. Highest, the 1st day, 30.200 inches. Lowest, the 7th day, 29.260 " Monthly Mean, 29°534. Monthly Range, 0°940. |
| 2 | .100 | .008 | .069 | 54.6 | 50.2 | 51.8 | .366 | .935 | N E | 70.10 | 10.0 | 6.272 | .... | 2.0 | Rain. | |
| 3 | .067 | .023 | .047 | 67.3 | 50.8 | 57.6 | .450 | .906 | N E | 91.08 | 9.6 | .... | .... | 2.6 | | |
| 4 | .000 | 29.929 | 29.968 | 67.9 | 47.8 | 59.9 | .462 | .893 | W | 11.52 | 5.3 | .... | .... | 2.0 | | |
| 5 | 29.930 | .904 | .920 | 78.2 | 43.5 | 61.6 | .501 | .853 | W | 31.61 | 1.3 | .... | .... | 1.6 | Rain. | Thermometer Highest, the 5th day 78°2. Lowest, the 29th day, 28°5. Monthly Mean, 48°24. Monthly Range, 46°60. |
| 6 | .622 | .410 | .546 | 56.2 | 54.0 | 58.2 | .439 | .903 | W | 29.64 | 10.0 | 0.076 | .... | 1.6 | Rain. [Snow | |
| 7 | .384 | .260 | .334 | 69.3 | 50.0 | 59.8 | .447 | .861 | S W | 59.91 | 6 6 | 0.320 | .... | 1.6 | Rain — First | |
| 8 | .302 | .300 | .300 | 43.4 | 19.1 | 39.8 | .227 | .870 | N E | 267.25 | 10.0 | 0.041 | Inapp | 2.3 | Rain. | |
| 9 | .491 | .462 | .475 | 43.0 | 29.2 | 39.1 | .217 | .852 | N E | 122.00 | 9.6 | 0.497 | .... | 1.6 | Rain | Greatest intensity of the Sun's rays, 92°2. |
| 10 | .514 | .479 | .491 | 48.1 | 36.0 | 43.0 | .256 | .868 | W bys | 221.00 | 3.3 | 0.146 | .... | 1.3 | | Lowest point of Terrestrial radiation, 24°0. |
| 11 | .891 | .759 | .834 | 53.3 | 35 6 | 45.5 | .279 | .864 | wbyN | 154.35 | 4.6 | ... | .... | 1.6 | | Mean of Humidity, .894. |
| 12 | .793 | .649 | .715 | 47.3 | 33.2 | 43.1 | .270 | .919 | S W | 47.26 | 10.0 | 0.046 | .... | 2.0 | Rain. | Rain fell on 17 days, amounting to 3.794 inches. |
| 13 | .519 | .477 | .504 | 45.2 | 37 4 | 42.3 | .271 | .981 | N E | 31.52 | 10.0 | 0.114 | .... | 2.0 | Rain. | Snow fell on 2 days, amounting to 0.10 inches. |
| 14 | .413 | .301 | .312 | 47.0 | 38.5 | 44.0 | .297 | .985 | N E | 107.96 | 10.0 | 0.210 | .... | 2.3 | Rain. | Most prevalent wind, N. E. |
| 15 | .653 | .357 | .442 | 48.1 | 42.4 | 46.0 | .319 | .999 | N E | 192.75 | 10.0 | 0.117 | .... | 2.6 | Rain. | Least prevalent wind, S. W. |
| 16 | .674 | .504 | .561 | 46.9 | 45.2 | 46.1 | .315 | .989 | N E | 64.00 | 10.0 | 0.052 | .... | 2.0 | Rain. | Most windy day the 8th day, mean miles per hour, 11.13. |
| 17 | .600 | .523 | .565 | 46.3 | 39.7 | 43.7 | .273 | .928 | wbyN | 54.60 | 9 6 | 0.024 | .... | 2.3 | Rain. | |
| 18 | .654 | .627 | .641 | 52.0 | 39.7 | 45.6 | .285 | .885 | W | 79.90 | 5.3 | .... | .... | 2.0 | | Least windy day, the 4th day, mean miles per hour, 0.7. |
| 19 | .671 | .663 | .667 | 52.2 | 39.3 | 45.6 | .293 | .912 | W | 47.70 | 6.0 | .... | .... | 1.3 | Au. Borealis. | |
| 20 | .597 | .804 | .537 | 49.8 | 33.1 | 44.2 | .282 | .918 | W | 57.49 | 7.6 | 0.018 | .... | 2.0 | Rain. | Amount of Evaporation 2.14 inches. |
| 21 | .767 | .752 | .759 | 58.1 | 35.3 | 46.8 | .311 | .910 | N N W | 191.69 | 2.6 | .... | .... | 1.6 | | Aurora Borealis, visible on 2 nights. |
| 22 | .759 | .667 | .685 | 54.0 | 36.4 | 47.7 | .308 | .891 | WbyN | 97.60 | 8 0 | Inapp | .... | 2.0 | Rain. | |
| 23 | .604 | .597 | .600 | 51.0 | 44.2 | 48.1 | .310 | .892 | W | 97.08 | 10.0 | Inapp | .... | 1.0 | Rain. | |
| 24 | .724 | .608 | .658 | 58 0 | 38.7 | 47.2 | .309 | .893 | N E | 110.90 | 4.6 | .... | .... | 1.3 | Au. Borealis. | |
| 25 | .829 | .809 | .818 | 49 7 | 34.1 | 44.5 | .272 | .897 | N N E | 117.20 | 8.6 | .... | .... | 1.6 | | |
| 26 | .764 | .506 | .646 | 61.3 | 33.2 | 47.2 | .308 | .863 | N W | 185.90 | 1.3 | .... | .... | 1.6 | | |
| 27 | .784 | .573 | .700 | 48.0 | 32.0 | 41.5 | .227 | .812 | NbyW | 116.29 | 8.0 | .... | .... | 1.6 | Rain. | |
| 28 | .369 | .279 | .325 | 42.1 | 33.6 | 39.0 | .229 | .900 | N E | 17.21 | 10.0 | 0.420 | .... | 3.0 | Rain.—Snow. | |
| 29 | .654 | .472 | .557 | 49.7 | 28.5 | 40.3 | .244 | .900 | W NW | 407.42 | 1.3 | 0.941 | .... | 3 6 | | |
| 30 | 30.000 | .724 | .841 | 50.1 | 34.7 | 42.1 | .243 | .857 | W | 113.22 | 0.3 | .... | .... | 2.0 | | |
| 31 | 29.847 | .705 | .768 | 50.9 | 31.2 | 41.4 | .238 | .870 | N W | 225.55 | 8.0 | .... | .... | 1.6 | | |

## MORTALITY OF THE CITY OF MONTREAL IN SEPTEMBER, 1864.

*Compiled from the Cemetery Returns, by G. E. Fenwick, M.D.*

### Mount Royal Cemetery.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 1 | 2 | 3 | 3 | | | | | | | | | | | | | | | | 1 | | 1 | | | | | 3 | |
| Senile Debility | 2 | 1 | 3 | | | | | | | | | 2 | | | 1 | | | | | | 1 | 2 | | 1 | | | 3 | 3 |
| Infantile Debility | 3 | 2 | 5 | | 5 | | | | | | | | | | | | | | | | 2 | 1 | 1 | | | 1 | 5 | |
| Small Pox | 1 | 5 | 6 | | | 5 | 1 | | | | | | | | | | | | | | 4 | | 1 | | 1 | | 6 | |
| Measles | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scarlet Fever | 2 | 2 | 4 | | 2 | 1 | | | 1 | | | | | | | | | | | 1 | 3 | | | | | 3 | 1 |
| Fever | 1 | 1 | 2 | | 2 | | | | | | | | | | | | | | | | | | 2 | | | 2 | |
| Convulsions | | 2 | 2 | | 2 | | | | | | | | | | | | | | | | 1 | | | | 1 | 2 | |
| Inflammation of Brain | 1 | | 1 | | | | | | 1 | | | | | | | | | | 1 | | | | | | | 1 | |
| Paralysis | | 2 | 2 | | | | | | | | | 1 | 1 | | | | | | | | | | 1 | | 1 | | 2 |
| Croup | 1 | | 1 | | 1 | | | | | | | | | | | | | | | | 1 | | | | | 1 | |
| Hooping Cough | 1 | 1 | 2 | | | 2 | | | | | | | | | | | | | | | | | | 2 | | 2 | |
| Inflammation of lungs | 1 | | 1 | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | 1 |
| Consumption | 3 | 5 | 8 | | 2 | 1 | 1 | 3 | 1 | | | | | | | | | | | 1 | 3 | 2 | 2 | | | 5 | 3 |
| Disease of Heart | | 1 | 1 | | | | | 1 | | | | | | | | | | | | | | | | | 1 | | 1 |
| Diphtheria | 1 | 1 | 2 | | | 1 | 1 | | | | | | | | | | | | | | | | | | 2 | 2 | |
| Inflam. of Bowels | 1 | | 1 | | | | | | 1 | | | | | | | | | | | | | | | | 1 | 1 | |
| Disease Liver | 1 | | 1 | | | | | | | | | 1 | | | | | | | | 1 | | | | | | | 1 |
| Diarrhœa | 2 | | 2 | | 2 | | | | | | | | | | | | | | | 2 | | | | | | 1 | 1 |
| Cholera | | 1 | 1 | | 1 | | | | | | | | | | | | | | | | | 1 | | | | | 1 |
| Marasmus | 1 | | 1 | | | 1 | | | | | | | | | | | | | | | | | | | 1 | | 1 |
| Accidental | | 1 | 1 | | | 1 | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| Not Stated | 1 | 1 | 2 | | | | 1 | | 1 | | | | | | | | | | | | | | | | 1 | | 2 |
| Childbirth | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 24 | 28 | 52 | 3 | 22 | 8 | 3 | 5 | 5 | | | 4 | 1 | | 1 | | | | 1 | 7 | 15 | 6 | 7 | 1 | 4 | 11 | 35 | 17 |

### Roman Catholic Cemetery.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Sœurs Grises. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 6 | 2 | 8 | 8 | | | | | | | | | | | | | | | | 2 | | 1 | 2 | | | 23 | 8 | |
| Senile Debility | 3 | 4 | 7 | | | | | | | | | | 6 | 1 | | | | | | 1 | 2 | | 1 | | | 1 | 4 | 3 |
| Infant. Debility | 53 | 46 | 99 | | 99 | | | | | | | | | | | | 1 | | | 10 | 13 | 1 | 9 | 9 | 7 | 41 | 8 | 89 | 10 |
| Small Pox | 9 | 5 | 14 | | 7 | 6 | 1 | | | | | | | | | | | | | 2 | 4 | | 1 | 3 | 2 | | 2 | 12 | 2 |
| Measles | 1 | 1 | 2 | | 1 | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 2 | |
| Scarlet Fever | 3 | 7 | 10 | | 2 | 8 | | | | | | | | | | | | | | | 4 | 1 | 1 | 1 | 1 | 2 | 6 | 4 |
| Fever | 15 | 19 | 34 | | 12 | 15 | 2 | 4 | 1 | | | | | | | | | | 1 | 3 | 3 | 4 | 4 | 5 | 4 | 10 | 26 | 8 |
| Inflam. Brain | 1 | 1 | 2 | | | 2 | | | | | | | | | | | | | | | 1 | | | 1 | | | 1 | 1 |
| Paralysis | 4 | | 4 | | | | | | | | 3 | 1 | | | | | | | | | | 2 | | | | | 3 | 1 |
| Croup | 1 | 1 | 2 | | | 2 | | | | | | | | | | | | | | | | | | | 2 | | 1 | 1 |
| HoopingCough | | 1 | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| Inflam. Lungs | 4 | 3 | 7 | | | 2 | 1 | 2 | | 1 | | | 1 | | | | | | | 1 | 1 | | 1 | 1 | | 2 | 3 | 4 |
| Consumption | 6 | 9 | 15 | | | | 3 | 5 | 3 | 4 | | | | | | | | | | | 2 | 7 | 1 | 3 | 1 | 1 | 11 | 4 |
| Disease Heart | 3 | | 3 | | | | | | 1 | 1 | 1 | | | | | | 1 | | | 1 | | | | | 1 | | 1 | 2 |
| Asthma | | 1 | 1 | | | | | | 1 | | | | | | | | | | | | | | | | 1 | | | 1 |
| Inflam. Bowels | | 2 | 2 | | | | | | 1 | | 1 | | | | | | | | | | 1 | | | | | | | 2 |
| Diarrhœa | 6 | 5 | 11 | | 10 | 1 | | | | | | 2 | | | | | | | | 1 | 2 | | 1 | 2 | 1 | 4 | 7 | 4 |
| Dropsy | 3 | 1 | 4 | | | 1 | | | | 1 | | | | | | | | | | 1 | 1 | 1 | | 1 | | | 4 | |
| Vermes | 1 | | 1 | | 1 | | | | | | | | | | | | | | | | | 1 | | | | | 1 | |
| Dentition | 13 | 27 | 40 | | 36 | 4 | | | | | | | | | | | | | 1 | 5 | 6 | 2 | 10 | 6 | 5 | 5 | 31 | 9 |
| Rheumatism | 1 | | 1 | | | | | | | | | | | | | | 1 | | | | 2 | | | | | | 1 | |
| Childbirth | | 3 | 3 | | | | 1 | 1 | | | | | | | | | | | 1 | | | 1 | | 1 | | | 2 | 1 |
| Cancer | 2 | 1 | 3 | | | | | | 1 | 1 | | 1 | | | | | | | | | | | | | | 1 | 2 | 1 |
| Accidental | 1 | | 1 | | | | | | 1 | | | | | | | | | | | 1 | | | | | | | 1 | |
| Total | 136 | 139 | 275 | 8 | 169 | 42 | 8 | 12 | 11 | 7 | 6 | 5 | 6 | 1 | | | 3 | | 4 | 29 | 42 | 22 | 31 | 35 | 27 | 42 | 40 | 217 | 58 |

## MORTALITY OF THE CITY OF MONTREAL IN OCTOBER, 1864.

*Compiled from the Cemetery Returns, by G. E. Fenwick, M.D.*

### Mount Royal Cemetery.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 3 | 1 | 4 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 4 | .. |
| Senile Debility | 2 | 5 | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | 3 | .. | .. | .. | .. | 2 | 1 | .. | 2 | 1 | .. | 1 | 1 | 6 |
| Infantile Debility | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| Small Pox | 1 | 2 | 3 | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | .. | 2 | 1 |
| Measles | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Scarlet Fever | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| Fever | .. | 4 | 4 | .. | .. | 2 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 3 | 1 | 3 |
| Convulsions | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. |
| Inflammation of Brain | 2 | 1 | 3 | .. | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 1 | 1 | .. | 1 | 3 | .. |
| Delirium Tremens | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| Apoplexy | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 1 | 1 |
| Paralysis | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Croup | .. | 1 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| Hooping Cough | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. |
| Inflammation of Lungs | 1 | 2 | 3 | .. | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 1 | 2 | 3 |
| Consumption | 4 | 1 | 5 | .. | 1 | .. | 1 | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | .. | 2 | 3 | 2 |
| Disease of Heart | 2 | 1 | 3 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | 1 | 2 |
| Diphtheria | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. |
| Inflam. of Bowels | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Diarrhœa | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cholera | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Disease of Liver | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Dropsy | 1 | 1 | 2 | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 2 |
| Gravel | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Total | 23 | 22 | 45 | 4 | 9 | 6 | 3 | 2 | 2 | 4 | 3 | 5 | 3 | 1 | 3 | .. | .. | 1 | 1 | 11 | 6 | 4 | 9 | 3 | 1 | 9 | 20 | 25 |

### Roman Catholic Cemetery.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10 years. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Sœurs Grises. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 6 | 5 | 11 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 3 | 3 | 1 | .. | 2 | 1 | .. | 1 | 11 | .. |
| Senile Debility | 7 | 8 | 15 | .. | .. | .. | .. | .. | .. | .. | 1 | 7 | 5 | 2 | .. | .. | .. | .. | .. | 2 | 4 | 2 | 1 | 3 | .. | .. | .. | 10 | 5 |
| Infant. Debility | 39 | 42 | 81 | .. | 81 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 | 2 | 2 | 3 | 8 | .. | 51 | 4 | 78 | 3 |
| Small Pox | 6 | 2 | 8 | .. | 2 | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 2 | 2 | 1 | .. | .. | .. | 1 | 5 | 3 |
| Scarlet Fever | 5 | 8 | 13 | .. | 3 | 9 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | 3 | 1 | .. | .. | 2 | 11 | 2 |
| Fever | 3 | 8 | 11 | .. | 1 | 5 | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 1 | 1 | .. | .. | .. | 5 | 10 | 1 |
| Inflam. Brain | 3 | .. | 3 | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | 1 | 2 | 1 |
| Apoplexy | .. | 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 1 |
| Paralysis | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| Croup | 5 | 1 | 6 | .. | .. | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 1 | .. | 2 | .. | .. | 3 | 3 |
| Inflamm. Lungs | 2 | 4 | 6 | .. | 2 | 1 | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 2 | 1 | .. | .. | .. | 3 | 3 |
| Consumption | 6 | 13 | 19 | .. | .. | 1 | .. | 6 | 7 | 2 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 3 | 4 | 2 | 4 | .. | .. | 1 | 9 | 10 |
| Disease Heart | 3 | 2 | 5 | .. | .. | .. | 2 | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | 3 | .. | .. | 1 | .. | .. | .. | 3 | 2 |
| Asthma | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| Diphtheria | 1 | 2 | 3 | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 2 | .. | .. | .. | .. | 2 | 1 |
| Dentition | 5 | 6 | 11 | .. | 11 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 4 | .. | 1 | 1 | 3 | .. | .. | 7 | 4 |
| Inflam. Bowels | 2 | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | 2 | .. |
| Diarrhœa | 1 | 1 | 2 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | .. | 1 | 1 |
| Disease Liver | 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. |
| Dropsy | 6 | 7 | 13 | .. | .. | 1 | 2 | 3 | .. | .. | 2 | 2 | 3 | .. | .. | .. | .. | 1 | .. | 2 | .. | 2 | 2 | 1 | 2 | .. | 1 | 6 | 7 |
| Erysipelas | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. |
| Cancer | 1 | 1 | 2 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | 1 |
| Childbirth | .. | 3 | 3 | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 1 | .. | .. | 2 | 1 |
| Accidental | 5 | .. | 5 | .. | .. | 2 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | 3 | 5 | .. |
| Total | 110 | 114 | 224 | 11 | 100 | 36 | 11 | 16 | 11 | 4 | 9 | 7 | 12 | 5 | 2 | .. | 1 | 1 | 2 | 25 | 32 | 21 | 21 | 23 | 28 | 51 | 19 | 174 | 50 |

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

### *Gastrotomy for the removal of Ovarian and other Tumors from the Abdominal Cavity.* By ROBERT NELSON, M.D., New York.

*Continued from page* 270.

SPONGE.—There is not the slightest need of a sponge during the cutting part of the operation, nor in the interior of the abdomen in cases of non-adherent tumors. When there are adhesions a sponge may (rarely) be needed to dip away the little blood that sometimes obscures the orifice of a divided arteriole, in order to secure it by torsion or ligature. The sponge ought never to be *rubbed* on the part, for, by doing so, the part becomes irritated, the innervation exalted, and the little plug that had closed the vessel drawn out; these effects create active bleeding after it has ceased. A good operator rarely employs a sponge, and when he does he is careful to make use of a new one, and not one that has been contaminated by use.

THE LONG AND SHORT INCISIONS CONSIDERED.—Early operators employed the "*long incision;*" that is, long enough to admit of the escape of the tumor, and to afford an insight to what they were about, a cut from fifteen to twenty-six inches long. Recent operators, anxious both for improvement and perhaps novelty, deprecate the long incision as being dangerous from its great extent, and advocate a short cut, since, by puncturing one or more cysts, the contents can be evacuated and so much reduced in size, that the sacks may be drawn through a cut of only a few inches long, and then severed outside of the abdomen, without exposing the viscera to the air. This notion has been largely put in practice of late years with results far from favorable.

A short cut is less painful than a long one. This is its only merit,

and which is now overcome by chloroform. In all other respects it is exceedingly defective. The short cut is utterly useless in all cases where the tumor is solid; also in cystic tumors that are adherent; for the solid tumor cannot be reduced in size since its contents cannot be evacuated, and therefore it cannot be brought through a small opening. Should the tumor consist of cysts and be adherent, the adhesions must be severed in the dark, with great risk to the parts to which it adheres, and in total ignorance of any hemorrhage that may occur. It is only ovarian cysts that can be diminished in size by evacuating their contents, and subsequently dragging the flabby portions through a short cut; a slovenly procedure, as any one who has seen this mode of operating can testify; a mode that favors the entry of some of this unnatural fluid into the abdomen, there to set up irritation and that inflammation which is so greatly feared.

The advocates of this method say a great deal about the advantages it gives of fixing the "stump" in the cut, and outside of the abdomen by means of a clamp, which is to strangulate the peritoneum and tissues within its grasp, until the part sloughs off outside; rather than leave it within the abdominal cavity, therein to slough, to putrefy, and empoison the patient.

All this surgical complication is due to hypothetical speculation in advance of what is expected to happen; to a fear of hemorrhage; to a fear of leaving ligatures in the abdominal cavity; to a fear of exposing the viscera to the malignant influence of the atmosphere; all of them imaginary and unfounded fears, completely disproved by experience; and what my old friend Blundell would call "meddlesome surgery."

The long cut admits of the only means of severing adhesions safely, without injury to adjoining parts, and admits of means to arrest any hemorrhage that, possibly, might happen from a divided artery; and in the case of a solid tumor is absolutely necessary to get space for it to pass through; enables the operator to see what he is about, and to get at the few small vessels going to it that may require ligatures.

Some operators advise and employ a thick ligature—whip cord—with which to tie the whole stump in a single noose. In this way a large "stump" will no doubt be left to putrefy; a disgraceful piece of surgery, when it is so easy to tie the few arteries that enter into it, divide it, and leave no stump of any notable size, behind. But to tie these vessels neatly and efficiently, it is requisite to have room, which the short cut cannot give; hence the lugging out of the stump, and strangulating the whole in a clamp; thus carrying surgery back to the epoch of horse-gelders and sow-spayers, who know not how to arrest hemorrhage otherwise than with clamps and searing irons.

By the clamp process the stump is forcibly stretched from the broad ligament, or the spine, according to the attachment, to the abdominal surface, like the yoke about a goose's neck. The viscera have to place themselves within the abdomen as best they can, on each side, above, and below, like about a post set up among them. The two edges of the abdominal incision bear on the right and left sides of the hauled out stud and must contrive to unite with the serous surfaces of the stud by some strange process—cut surfaces with serous surfaces.

There need exist no fear of hemorrhage in ovarian cases, since only two sets of vessels travel along the broad ligament to the tumor, both of which can be rolled under the peritoneum and collected into two groups; one, the spermatic at the upper edge; the other, some uterine from the internal iliac at the lower edge, each group to be strangled with a fine ligature into a compass scarcely as large as the size of a crow quill, as is manifest by the loop of several ligatures in my possession that have come off in the course of cure.

The fear of inflammation from leaving two or more ligatures attached near the sacrum, and hanging out at the lower end of the cut over the pubis is unfounded. The greatly relaxed parietes in these cases render them much less liable to inflame than do parietes that have never been stretched and are tense.

Another fear, that of air entering by the side or track of the ligatures, is also unfounded; since, during the first few days after the operation the peritoneal liquor oozes constantly out, a discharge from within being opposed to an entry from without; and this discharge ceases only when by a little fibrinous exudation around the ligatures in their whole track it encloses them in a canal, and by this means virtually excludes them from the abdominal cavity.

There is no difference in the length of time requisite to heal a short and a long cut; since the agglutination takes place throughout the whole length of each at the same moment, and not progressively from one point to the next successively. The process that unites one atom of the cut goes on in all, at one and the same time. In gastrotomy, in cases of a previously distended abdomen, when properly performed and judiciously dressed, I have found union to take place without any inflammation, even of that low degree erroneously called adhesive; and have only seen a little of it with a harmless suppuration where the ligatures come out above the pubis.

THE OPERATION.—Any medication of the patient previous to the operation is either useless or hurtful, as fretting the economy to some extent. All that need be done is to give a dose of castor oil the day

previously, or an enema in the morning before the operation, merely to empty the bowels; and the enema should simply be tepid water.

The patient well under chloroform, being on her back, should the tumor incline to one side more than to the other, let an assistant push it so much to the other as to make its centre of convexity lie directly under the linea alba. The operator now commences by making a steady, deliberate cut from a little above the pubis to half way above the umbilicus, or higher up or quite to the scrobiculus, according to his judgment of the size of the tumor. Let it be made fearlessly through the skin down to the fascia over the linea alba. No blood, or less than a spoonful, will escape if it be made exactly in the median line. Let him next, either above or below the umbilicus, exactly in the centre of the linea alba, neither to the right nor to the left of it, cut carefully three or four inches long until he comes to the peritoneum, which is readily distinguished should the tumor be non-adherent in the centre. To enter the abdomen in this way there is no need of probes, directors, forceps, &c., and that scratching and lamina, after lamina dissection too often seen done. Having entered the cavity of the peritoneum he will insert two fingers; on one or between both, place the back of his knife, the edge forward, and then carry it down and upward in the direction of the first incision to the extent needed, and thus effectually and safely open the abdomen. This much completed, insert the hand, palm towards the tumor, one on each side of it, and if there be no adhesions, turn the mass out; but care must now be had that an assistant support it when outside of the abdomen, lest by its great weight it draw too much on the broad ligament, tear or do other injury. The next step is to secure the vessels, which is easily done by collecting them as already said, into two groups, since they roll freely under the investing folds of the peritoneum, one set at the upper edge of the broad ligament, the other set or group at the lower edge, dividing the space between, which contains no vessels. A careful cut must be made through the peritoneum, which lies on and under the vessels, which can be done without the slightest risk of wounding them, in which cut the ligature must be buried; in this way the peritoneum will suffer less than when strangulated. Let the ligature, a small one, be drawn quite tight, and the same done to the other group. Leave at least nine inches long of the ligature to hang out at the lower end of the incision over the pubis. Next cut through the attachment or pedicle of the tumor about half an inch from the ligatures; in this way no fearful "stump" will be left behind, more than is left in the case of arteries in amputations. The tumor is now extirpated. Wait a few minutes and see that all is right—there need be no hurry. During the

operation the intestines may escape when the tumor is small, or from straining of the patient should the chloroform be insufficient, or excite vomiting; but the escape of intestines is a rare occurrence when the tumor is large, because the patient has not had capacity sufficient in the stomach to take in enough food to nourish her; she is lean, and the pressure of the tumor has caused the absorption, more or less complete, of the mesenteric and omental fat, so that what with emptiness and absence of adeps, I have seen the intestines remain in the cavity of the abdomen resembling flat ribbons. However, should the intestines escape, suffer no meddling with them, which will injure them more than leaving them outside, untouched by busy hands, until it is time to close the wound. The surgeon ought to do this without assistance, and without touching them, by merely taking hold of each side of the cut as he would the open mouth of a bag, and lifting the loose and flabby parietes up, the intestines will naturally slip in of themselves. Any attempt to restrain their exit during the performance of the operation will be to bruise them, and embarrass the operator.

The next step in the operation—the closure of the abdomen—is a very nice one, to exactly and neatly approximate the edges of the incision. For this purpose four twisted suture pins will be required to transfix and maintain the edges in perfect coaptation. These pins must be at least three inches long, made of brass, copper or iron wire well tinned—copper in the best, as being very pliable and easily bent after insertion to suit the track it lies in. To insert them, pass the steel needle through the skin an inch from the edge of the wound on one side of it, thrust it obliquely inwards until it pierce the peritoneum half a line from its cut edge within the abdomen, again pierce the opposite side in a corresponding way to come out at the same distance as the first entered. Fit the cut edges exactly and neatly together, and with a figure of 8 ligature secure this first pin. Do the same with the three remaining pins at equal distances from each other. This done insert at suitable intervals a sufficient number of common interrupted sutures between the interspaces of the pins. Add long straps of adhesive plaster, and place over the line of cut a strip of old rag moistened with a little blood that can be had by squeezing out the veins of the removed tumor. This blood dressing is the one most congenial to a wound; it soon dries, and retains the parts like a splint, and is easily removed when *quite dry*. Lastly, lay a compress, made of one or two folded napkins on, with a sufficiency of tow to fill up the empty belly to the level of the ribs, so as to press up the liver and support it from hanging too heavily on its ligaments, until the ribs come down. Retain this thick compress by a many-tailed

bandage, the only kind that will fit snugly and not roll up out of shape and place as does a broad napkin. The many-tailed bandage ought to have its slips scarcely four inches broad, and so laid on each other that the centre one opposite the navel will be the first one lapped on, and the next one above and below to shingle over each other alternately, to reach as high as the ribs and as low as the pubis; the last slip to be passed under the nates, come over the groins up in front of the abdomen, there to be pinned, or tacked with stitches, to those that already encircle the belly.

SUBSEQUENT TREATMENT.—The operation is now finished; the patient in her bed, and soon out of chloroform, is to take three grains of solid opium (no morphine or other fancy preparation). After this she will probably sleep six or eight hours. After that period some slight pain will return, and is to be met with another dose of one or two grains more. It may be necessary to repeat the opium in two grain doses for a few days, morning and evening; but the larger dose should be given in the evening, as that is both the time of exacerbation and the natural period of repose when opium acts most kindly. It is better to give one adequate dose that will last several hours, than tease the system with repeated small doses. After a full dose the system may be allowed time to recover from its unnatural state—the effect of opium; but, never give more, nor oftener than there be real need for, indicated by pain. Where there is pain there is irritation, and where there is irritation, inflammation is likely to be set up—*ubi dolor, ibi fluxus est.*

There is no occasion to move the bowels—a routine practice, injurious after an operation that requires the greatest repose of the body and viscera—nothing interferes more with the recovery of the parts than acting on the bowels. The patient may well go five or six days without a motion, unless flatulency require an enema, or a small dose of castor oil to restore peristaltic action of the intestines; as the bowels were never full for a long time before the operation, and what little remained was removed by the enema, and nothing since accumulated within them during the low diet. But the diet must not be too low, the stomach must not be left empty, like a mill without grist to grind, therefore she must have a little bread and toast water, or tea, or both, according to her previous habit of living, for a few days.

The dressing need not be changed earlier than the fifth or six day, when some of the sutures may be removed, and the dressing carefully replaced.

In cases where there have been no adhesions, and the peritoneum remains natural, it will secrete as usual a small quantity of *liquor abdo-*

*minalis*. This will escape at the exit of the ligatures, and wet the lower portion of the dressing for a few days; a little later, the ligatures become enclosed in a sort of canal made by a slight deposit of fibrin, and thus become shut out, as it were, of the abdominal cavity, and now no more will escape. Care must be taken to secure the outward ends of the ligatures under adhesive plaster to prevent their being drawn out before the vessels they constringe become completely closed. The ligatures, left to themselves, will take from three to five weeks to come away of themselves, because they always include a small portion of the fibrous tissue that accompanies the vessels in the broad ligament. But no inconvenience results from their so remaining, since the patient can go about as in health.

The foregoing description of the operation of gastrotomy may be taken as the type of any one form for the removal of tumors generally, from the abdominal cavity. Variations may be needed in particular cases, as when adhesions exist. Also, when the case turns out to be a fibrous out-growth from the uterus, and fibro-fatty tumors.

Gastrotomy may be availed of for the extirpation of the uterus, as suggested by Blundell nearly fifty years ago. On one occasion I hesitated between the extirpation of the uterus, or excision of a large fibrous tumor that grew from its base, and ascended mid-way, between the umbilicus and scrobiculus, filled both iliac regions and encroached on the hypochondria; its pedicle, if pedicle it might be called, was over three inches in diameter, and was blended with the substance of the enlarged fundus of the uterus. It was severed close to the uterus; the patient recovered perfectly in three weeks' time. At the time of the operation it was hard to say which of the two, severance from the uterus, or extirpation of the latter with the tumor, was likely to be the safer operation. Had I decided on the removal of both, I should have first tied the two internal iliac arteries, a simple and easy operation in the then open abdomen, where the vessels lie very apparent. In such a case the principal difficulty will be to sever the organ from the urinary bladder in front, and from the rectum behind, besides a careful regard not to wound the ureters. The open vagina can be closed with a couple of sutures, so inserted as to permit the ends to come through the vulva.

Very rarely gastrotomy may be needed for the removal of a fœtus in case of its escape into the abdomen through a ruptured uterus, and for the removal of the remains of an extra-uterine conception. Such an operation is very simple in its execution, and the incision will be of very limited extent.

Cæsarian section I think ought never to be performed. There are

very few cases of natural obstruction so complete as will not admit of instruments capable of extracting the fœtus, piecemeal at least, by the natural passage, and so save the mother in preference to the fœtus. I have seen several Cæsarian operations performed in 1832 and 1834, to satisfy or rather gratify a bigoted clerical prejudice. They were all unfortunate and cruel.

A Few Miscellaneous Remarks.—It is not without great interest that we can look into the empty abdomen after the removal of a large tumor—for the cavity looks empty. The stomach will be found very small, and all the intestines nearly empty, and so reduced in size as to resemble flat ribbons; no fat anywhere, in long standing cases,—even about the kidneys. In this state of emptiness, and no support on the vessels, we cannot help smiling at the caution so seriously inculcated in cases of paracentesis to keep up great pressure, without which it is supposed that syncope—even mortal syncope—may occur.

*Whipcord* as a ligature to the pedicle is too large to be capable of being drawn sufficiently tight to compress the small vessels it is so disproportionately applied to. It will stand a strain of nearly a hundred pounds without breaking, a force much greater than needed. A single thread well applied I have found adequate to every purpose.

*The Ecrasure* (crusher), a novel instrument recently introduced to sever parts without the risk of hemorrhage. It is a more barbarous instrument, if possible, than the gelder's clamp, and equally disgraceful to the progress surgery has made. Where it can be applied with precision, and bruise its way through parts, a knife can cut with exactitude, and any severed vessels tied, should the surgeon possess no more than limited abilities.

One word more about hemorrhage in the case of extirpating ovarian tumors. Here, hemorrhage can come from two sources only—I say nothing about adhesions. The first is from the spermatic vessels; these cannot give trouble. The second source is more important, furnished by the uterine vessels, deep in the hollow of the sacrum, where, in a few cases, difficulty may be encountered from the "welling up" of blood. But this can be easily commanded by a good assistant, compressing the internal iliac with his finger against the brim of the pelvis—alternately pressing and relaxing—to enable the operator to see the point of escape, and there apply a ligature with the aid of a forceps or tenaculum, or the old method with a needle.

*Puerperal Mania the result of metritic irritation from imperfectly developed scarlatinal exanthema.* By J. A. GRANT, M.D., F.R.C.S.E., M.R.C.P.L., &c. Attending Physician General Protestant Hospital, Ottawa.

On the 25th October, 1864, Mrs. W., aet. thirty-five years of age, a woman of regular conformation of body and somewhat robust, was delivered of her fourth child after a natural labor of four hours' duration without an unfavorable symptom. On the evening of the third day after her delivery she had a rigor, succeeded by heat of skin, without any particularly localized pain. The pulse 120 and weak, mouth parched, tongue furred, bowels relieved by castor oil, which was administered the night previous. Urine voided in moderately normal quantity, but high colored and abounding in uric acid and urates. Ordered compound powder of ipecacuanha gr. v., with two of calomel. She slept several hours during the night, and next morning the skin was covered with a bright scarlet eruption, particularly the face, neck, shoulders, and chest, accompanied by a general aching sensation over the body, but more particularly at the articulations of the joints. There was slight headache, suffusion of the eyes, fauces red, tonsils humid, tongue moist and covered with a slight fur, much thirst, pulse 120, skin over the abdominal surface pale, excepting a few mottled patches; no very marked tenderness experienced upon pressure over the abdomen; uterus firm and well contracted.

Ordered ℞ Ammon. sesquicarb. ʒ ss.
Liquor ammon. acet. ℥ iss.
Mistura camphora ℥ ii.
Aqua distillato. ℥ ivss.

Misce: sumat. cochl. amplum tertia quaque hora. The feet placed in warm water, hot fomentations applied over the abdomen and a sinapism to the neck, the bowels also relieved by an injection of gruel. During the afternoon of the third day from the development of the eruption, delirium supervened, of which there was not any particular indication previous, either in the countenance or general demeanor of the patient. Soon, however, there was observed a troubled, agitated and hurried manner, a restless eye with the usual suspicious and unpleased expression of face, a constant desire to talk, contradict and compose rhyme, after being asked a question, without any desire to answer, inclined to leave her bed, and destroy her garments; pulse still rapid and compressible, temperature of the skin reduced several degrees, tongue coated with a slimy fur and the saliva scanty and glutinous, urine voided in small quantity and the lochia less copious than the day previous and slightly fœtid. She

now most obstinately refused treatment, and at once removed any application made to the surface. Having observed that the eruption on the abdominal walls was not uniform with that over the body, the idea occurred to my mind, that the maniacal symptoms might arise from an arrest of development in the eruption over the abdomen. ℞ olei crotonis tiglii ʒ ii, olei olivæ ʒ ii mixed. Rubbed over the abdomen three times each day until a full crop of pimples appear. After the lapse of eighteen hours a copious eruption was produced, on the appearance of which, the delirium subsided in a remarkable manner, and sleep being now induced through the administration of an opiate, the following morning sensibility was restored, the whole of the two days being to her a perfect blank, not even retaining the slightest recollection of what had transpired on November 4th; the eruption had nearly faded away, and no pain in the joints was complained of. The sore throat was relieved by a gargle of potass. chlorat. with tinct. myrrh and honey. Nov. 6. From this date the case progressed most favorably, and, during the following week, desquamation of the cuticle commenced, and continued to the end of the third week, the cuticle of several fingers being so detached as almost to resemble a glove finger in shape. As the system became relieved, the various secretions returned to their normal state, and the function of the brain soon became as vigorous as ever.

Remarks.—It is a well established fact that pregnant women are not so liable to become the subjects of infectious diseases as other individuals, pregnancy acting the part of a safe-guard; on the other hand, however, the system is unusually susceptible to the same unhealthy actions after confinement, from which it was comparatively speaking free while the fœtus was in utero. Two children of Mrs. W. were seized with scarlet fever, and had recovered fully ten days prior to her confinement, the house being thoroughly ventilated and every precaution taken to avoid infection. Notwithstanding these purifying measures, the mother was no sooner delivered, than her system became the nidus for the zymotic poison, than which, under such circumstances, none could be more fatal to the parturient female.

Dr. Ramsbotham, in his recent work on parturition, p. 443, states that of the numerous cases which he witnessed in London, only two recovered; one in a state of abject poverty, the other surrounded by all the comforts which affluence could bestow. Tweedy says, it is a fatal disease when it attacks pregnant or puerperal women; Watson says, when scarlet fever befals parturient women, it almost always proves fatal. "Scarlet fever, during pregnancy, most certainly ends in abortion and death. If the woman be recently delivered, the disease will be of the

most malignant type, and almost always fatal." (Dr. Aitken's Practice of Medicine, Vol. I., p. 329.) In scarlatina, "pregnancy also adds to the danger, as the woman frequently miscarries. The prognosis is also extremely grave when it attacks women immediately after parturition." (Wilson on Diseases of the Skin, p. 421.) Several facts in connection with this case render it of interest, more especially in a pathological point of view. We observe how the admission of the zymotic scarlatinal poison into the system was followed by the symptoms, viz., the shivering pain over the uterine region, rapidity of pulse, not *full* and *strong*, but *weak* and *compressible*. It is now admitted "that these symptoms frequently indicate the passage of poisonous material into the blood." (Dr. Hewett on the Diet of Child-bed, Canada Medical Journal, No. 5, p. 239.) As proof of this opinion we could not seek a better illustration. These symptoms were not the result of inflammatory action, but rather the outward manifestation of the accumulation within the system of the particular poisonous material, which, when thoroughly developed, particularized the scarlatinal type of fever. These various indications pointed out a course of treatment not anti-inflammatory, but stimulating and supporting. The human system can be subjected to no greater changes than those taking place during the period of pregnancy; the growth of the uterus and its appendages during gestation, and their relapse to their pristine condition after it, are changes so gradual on the one hand and sudden on the other, that constant observation is requisite in order to guard against diseases to which the system, at this particular time, is so liable. Scarlet fever being essentially a blood disease, "the effect of the poison, as justly observed by Dr. Golding Bird (Grey's Hospital Reports, April, 1854, p. 136), is a determination of blood towards the cutaneous and mucous surfaces, shown by the characteristic rash on the one, and the erythematic state of the other. If the eruption be fully developed, the effects of the poison become exhausted. But if the effects of the scarlatinal poison be interfered with, by any irregularity, the poison not being carefully eliminated, some of the recognized of its effects result."

The existence of an imperfectly developed exanthem over the abdominal surface, coincident with the appearance of maniacal symptoms led me to suppose that the metritic irritation resulting from this imperfectly eliminated poison excited the *cerebrum* in a *reflex form*. Owing to the unmanageableness of the patient great difficulty was experienced in treatment, in consequence of which strong croton oil liniment was applied copiously over the abdominal walls as a *dernier ressort*. After eighteen hours considerable pustulation and surrounding redness was produced over the entire region. No sooner had this change taken place than the

constitution commenced to regain its tranquillity and the mind its powers, the great source of metritic irritation being removed through rapid direct counter irritation. In addition, the system was supported by wine, beef-tea, and ammonia. The case progressed to a most favorable termination in the course of ten days without any further trouble. The infant has not so far contracted the disease from which, under existing circumstances, it may be free. In this case there was no tendency to puerperal insanity of the hereditary type, such as has been made out by Gooch, Burrows, Esquirol, and many others.

Ottawa City, Dec. 15, 1864.

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*Case of Delirium Tremens, treated by Digitalis. Recovery.* By J. H. HUNT, L.R.C.S.I., Assistant Surgeon 1st Batt. Prince Consort's Own Rifle Brigade.

Private John McN——, aged 37, presented himself at the Regimental Hospital, the morning of the 11th May, 1864, complaining of pain in the joints of the lower extremity, anorexia, and loss of sleep. His general appearance indicated that of a man suffering from the effects of protracted tippling.

He was ordered to bed, and alcoholic stimulants and opiates were administered.

May 12th.—Loss of sleep during the night, accompanied with violent delirium; pulse accelerated; tongue tremulous, moist and creamy; surface of body covered with cold clammy sweat; bowels open.

Beef tea and alcoholic stimulants, and the following draught every three hours:

℞. Spt. eth. chlorici, m. 40.
Sol. mur. morph, m. 30.
Mist. camphoræ, ℥j., misce.
Ft. haustus.

Slight improvement since morning.

6 p. m.—Slept about one hour; vomiting set in, which was checked by effervescent draughts.

13th.—Third day of attack; passed a sleepless night; was violently delirious, which, at the time of visit, assumed a low muttering type; constant jerking of the limbs, and pricking at the bedclothes. Pulse 150, weak and intermittent; surface of body covered with cold clammy sweat. He was evidently sinking.

As *la médicine expectante* was obviously inexpedient, and, as no time

was to be lost, in consultation with Surgeon Major Bowen, I determined to try the effect of digitalis.

Half an ounce of the tincture was administered (care being taken to keep him in a horizontal position). The effect was magical!

The *pulse* fell, in less than half an hour, from 150 to 100, and increased in volume; the nervous excitement became allayed; *the temperature of the body was raised;* the jerking of the limbs ceased; and he soon subsided into what seemed a restless half drunken slumber.

3 p. m.—After a brief period of rest, delirium again supervened. Half an ounce of the tincture of digitalis in porter was again administered with similar but more permanent results. The delirium subsided; the pulse fell to 90; the temperature of the body was increased, and he again subsided into an uneasy sleep which continued until 8 p. m., when he awoke slightly excited and bewildered. As his pulse was now reduced to 75, we did not deem it judicious to push the digitalis further. Half a drachm of solution of morphia was accordingly administered, which produced sleep, sound and refreshing; and from which he awoke the ensuing morning, calm and rational but somewhat shaky; this latter, symptom, however, soon disappeared under the judicious administration of tonics and stimulants.

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## REVIEWS AND NOTICES OF BOOKS.

*Transactions of the Obstetrical Society of London.* Vol. 5, for the year 1863. London: Longman, Green, Longman, Roberts, and Green, 1864. 8vo. pp. 325.

The interchange of ideas of members of any profession or votaries of any science, must be of incalculable benefit not alone to the members, but to the advancement of that particular science. The various societies of the principal cities of the Old World have been so many rallying points whose meetings have made science what it is at the present day. Many, we may say nearly all, the discoveries in science owe their birth to the existence of these societies, whose aim and object have been the advancement of learning and consequent benefit to the human family. The Obstetrical Society of London is by no means behind other bodies similarly constituted, as for usefulness it is, perhaps, one of the most successful organizations of the day. The last volume of its transactions, the fifth of its series, comes to us replete with original matter, most valuable from its practical bearing, and as enunciating the views of many of the leading obstetricians of Great Britain.

The first paper by J. H. Aveling, M.D., Sheffield, is on vaginal lithotomy. After a succinct history of the operation, the author concludes with a description of a case which came under his observation. He gives the results of thirty-five cases which he has collected. Vaginal lithotomy was first performed by Fabricius Hildanus in the year 1568. It is an operation of ease and perfect safety, and not necessarily followed by vesico-vaginal fistula; but should that event occur, it is easily remediable with the means now at hand. There can be no doubt that a clear cut is much less liable to be followed by failure, if the edges of the wound are well brought together, than when the posterior wall of the bladder has ulcerated through from the continued pressure of a stone, or from sphacelus, the result of pressure of the child's head during difficult or protracted labor.

Mr. Aveling describes the steps of his operation. After removal of the stone he closed the wound with four silver sutures placed a quarter of an inch apart; after having adjusted them, eight or ten gilt beads were slipt over the ends of each suture and run down to the lips of the wound; these were kept in position by perforated shot placed on the ends of the sutures and tightened upon them, the ends of the wire being clipt off close to the shot. On the seventh day the wound was found completely united, the shot and beads removed, but the sutures not taken out until the end of the tenth day. Mr. Aveling found some difficulty in removing the last bead which had become embedded in the tissues; to obviate this difficulty he proposes using a coil of wire, easily made by winding on a moderately large sized pin, so as the coils may closely adhere; this can be made of any length to suit the wishes of the operator, and can be secured by a split or perforated shot in the ordinary way.

The next paper is by Mr. J. Baker Brown, on vesico-vaginal fistula, The author gives the details of seventy-two cases, seventy of which were under his own care. We have extracted the following as the results of his success:

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| Cured - - - - - - | 60 |
| Not cured - - - - - - | 6 |
| Died - - - - - - - | 2 |
| Under treatment - - - | 4 |
| Total - - | 72 |

The cases of non-cure admit of analysis. One was so far relieved that very little urine passed by the remaining fistula; in three the failure was the result of bad general health, one was discharged from the hospital for unruly conduct, and one would not consent to further treatment,

the fistula much lessened in size by two operations. Of the two fatal cases, one died on the eighteenth day after the operation from exhaustion, the other at the end of a week from pyæmia. Mr. Brown's observations lead him to the belief that vesico-vaginal fistula is very generally produced by protracted or difficult labor. Of fifty-five cases admitted into the London Surgical Home, seventeen were the result of protracted labor, but in whom delivery was effected by nature unaided, and thirty-eight required surgical interference to effect delivery. In the great majority of these cases the labor was of long duration, forty-seven being over twenty-four hours. "The obvious inference is that we should never allow a labor to become protracted."

Mr. Brown reccommends the use of silver sutures in preference to silk or iron wire; with regard to the time that sutures should be permitted to remain in, he states that they should not be removed before the end of nine days; in one case, at the patient's request, they were taken out on the sixth day; the fistula appeared quite healed; contrary to advice she left her bed on the following day, when the whole again burst open, requiring a second operation, which was attended with success. He believes no harm can arise from leaving the sutures in for even longer than nine days; he had kept silver sutures in for six and nine months without a trace of ulceration appearing. With regard to his method of adjusting the sutures, he merely fastens them by twisting together the ends in the ordinary way, so as to sufficiently approximate the edges of the wound, but carefully avoiding all undue or unnecessary pressure.

Dr. Clay, of Manchester, gives a most interesting paper on ovariotomy. His results speak volumes in favor of the operation. By this paper we learn that of 108 cases of ovarian diseases operated on by him, thirty-four only died, giving him seventy-four recoveries; of the deaths, ten died from the immediate consequences of the operation or shock; ten from peritoneal inflammation about the third day; twelve from prostration on or about the sixth or ninth day; and two from hemorrhage.

Dr. Clay dwells on a few practical points in reference to this operation, which, coming from such a source, cannot be passed over. With regard to the use of chloroform, he prefers operating without it, "as the patient would bring to bear on her case a nerve and determination to meet so great a trial, which would assist beyond all value the after treatment."

The large incision is advocated by our author, as he is firmly impressed with the advantage of "a bold and large incision through the integuments, at once affording plenty of room for every manipulation, aided by the eye, than to require a subsequent enlargement, or to drag cysts or solid masses, through small openings, without a knowledge of what attachments

may possibly exist behind." Dr. Clay prefers using the Indian hemp as a ligature for the pedicle; he states that silk, which he formerly employed, is apt to slip, and he is not an advocate for the use of the clamp. Distressing gulping, and vomiting he regards as due to the employment of chloroform: very little can be done by way of relief, but care should be observed in the amount of food given the patient; very little of any kind should be permitted until the sensitiveness of the stomach is allayed. The author has observed certain periods in the progress of treatment or critical days. If the patient does not sink from the shock during the first twenty-four hours, the next critical period is the third day after the operation, when she may sink from unsubdued inflammation; the next critical period is the sixth day, when he apprehends danger from prostration, after the subsidence of peritoneal inflammation. If the patient is young, this period is deferred until the ninth day.

The twelfth day is very frequently accompanied by troublesome symptoms, consequent on the loosening or entire separation of the ligatures on the pedicle. After this period the Dr. considers his patient comparatively safe. With regard to his mode of treatment in cases where inflammation supervenes, he trusts entirely to hot fomentations, and other anti-phlogistic means, but never bleeds.

Dr. Clay attaches great importance to the use of ox-gall inspissated, in the form of pill. He states it acts gently without purging, and prevents flatus. He says "the enema is at all times sufficient to unload the bowels, without straining. I never allow the patient to empty either bladder or rectum without the assistance of catheter and enema, for the first five or six days after the operation."

Dr. Clay has operated at all ages, from sixteen to fifty-seven, and no age presents itself as more successful than others. He states, that had he a choice, he would "prefer that period of life for the operation when menstruation is about to cease or had altogether ceased." Patients at this period, if not much emaciated or worn down by the disease, appear to have a better chance, as there is less likelihood of inflammation, they bear the operation better, and are more disposed to submit to restraint and self-denial, so necessary towards a successful issue.

Dr. Clay concludes his paper with the details of an operation for extirpation of the entire uterus and appendages, which he performed in January, 1863, and which was attended with success.

We pass over several interesting papers on various subjects, and come to one by Thomas Skinner, M.D., Liverpool, on the Galactagogue Properties of Faradization. Dr. Skinner was led to his experiments from the known influence of the nervous system on secretion, as also from the

facts shown by Ludwig, Bernard, and others, of the secretion of glands being increased by artificial stimuli applied to their nerves.

He gives the results of eight cases, which were all successful. He applies the galvanism to the breast for a few minutes at a time, using the ordinary electro-galvanic coil machine, and passing a very gentle current through the gland. He arms the ends of each pole with a piece of sponge, wet with tepid water,—the positive pole he presses deep into the axilla, and with the negative touches lightly the nipple and surface of the areola, never permitting the current to be strong enough to be unpleasant or disagreeable; this he keeps up for two or three minutes at a time, not more; in one instance the action was continued for ten minutes. A single application is generally sufficient, but if not, it should be repeated each day.

John Shortt, M.D., Chingleput, Madras, gives a most interesting paper on the medical history of woman in Southern India. The author details the ceremonies performed at different periods of woman's life, by the four principal castes of Southern India, viz., the Brahmins, Hindoos, Mahomedans, and Pariahs from the period of menstruation to childbed, with a general view of the obstetric practice of the country.

This latter is of an exceedingly low type, as the poor patients are generally delivered by native women, who do not scruple to use extraordinary violence to effect delivery.

It is seldom that the aid of an European physician is sought, and then only in those extreme cases which baffle the native midwives.

There is a paper by Dr. Charles Kidd on the use of anæsthetics in midwifery, which will repay perusal.

A paper by Dr. Clay, Manchester, on the use of wire loops in malpositions of the uterus, with a plate illustrative of the shape of the loops proposed.

There are several other papers of very great importance and high value in a practical point, as are also the discussions on the several papers which are appended to each, but space will not permit our referring to them. Altogether the book will be found a most valuable addition to the library of the general practitioner, and we can confidently recommend it to our readers. The typography is excellent, and the paper, as in all English works, superior. There are several wood engravings, which we think admit of improvement: they lack that clear distinctness which we have been accustomed to see. It is to be had on application to the secretaries of the society, Graily Hewitt, M.D., or John B. Hicks, M.D., F.R.S., of London, England.

*Therapeutics and Materia Medica: a systematic Treatise on the Action and Uses of Medicinal agents, including their Description and History.* By ALFRED STILLÉ, M.D., Professor of the Theory and Practice of Medicine in the University of Pennsylvania, &c., &c. Second edition, revised and enlarged. In two volumes. Vol. 1, pp. 776; Vol. 2, pp. 819. Philadelphia: Blanchard and Lea. 1864.

After a lapse of four years, Dr. Stillé has prepared a second edition of his truly valuable work, which, since its appearance in 1860, has been extensively used as a standard authority in this department of medical science. This edition has been thoroughly revised, and is brought down to the present day, as whatever the author has regarded as constituting a real advance in therapeutical knowledge has been incorporated in it. The nomenclature and formulæ for officinal preparations have been made to conform to the recent edition of the American Pharmacopœia. A few medicines of minor importance have been omitted; and several new preparations have been added. Considerable and important additions have been made to almost every article. The general arrangement of the work has reference to the therapeutical action of the remedial agents,—an arrangement which is not always the best, as it frequently necessitates seeking for a description of the remedial agents in different parts of the same book. This objection does not seem to obtain in the work before us. With regard to the details of the therapeutic application of the various remedial agents. these volumes are particularly rich,—a fact of itself sufficient to stamp the real value of the work to the practitioner and general student, to whom it will be found of more value than to the pharmaceutist.

The work commences with an introduction, wherein will be found an account of the sources from which medicines are derived—the sources from whence we have acquired our therapeutical knowledge,—the sources of knowledge respecting the action of medicine—the physiological action of medicines—their local action—remote action—absorption—the avenues through which medicines are introduced—their effect—the curative action of medicine—the influences modifying their effects—the administration of medicine—the art of prescribing,—and their classifications. No person can read over this list without recognizing the importance of each subject in connection with the study of therapeutics. In speaking of the sources from whence our knowledge is derived of the curative influence of medicines, the author observes:

"The word to *cure*, in its proper and etymological sense, means to take care of, and it is only derivatively that it has come to signify to heal or 'to restore to a sound or healthy state.' The distinction is

happily expressed in the Latin line, *Medicus curat, Natura sanat morbos*, Physicians *cure*, but Nature heals. Medicine is only the handmaid of nature, the really active and efficient agent in the restoration of health; Medicine can do no more than remove the impediments from nature's path, support her when faint, restrain her when violent, and guide her when she is inclined to err. But the vital powers and functions of the organism have an inherent tendency to return to their normal condition when deranged by any cause, and to remove or repair the alterations of structure which may have attended that derangement. In this consists the healing power of nature, *vis medicatrix naturæ*, which, under various names, was recognized even in the earliest stages of Medicine, and, indeed, more fully then than at any subsequent period until modern times.

"In diseases the least amenable to art, as well as in those acknowledged to be spontaneously curable, the power of Nature is clearly manifested. It is not pretended that any human resources can secure the arrest of tubercle, yet Nature not unfrequently converts the tuberculous into a calcareous deposit, in which form it remains permanently innocuous. The highest achievement of art is to sustain nature, that she may have time, if possible, to perfect her work. The whole process by which wounds are healed is a natural one; and consists simply in the establishment of the nutritive process between the divided surfaces; of the exudation of a plasma and of cells, the formation of blood-vessels, and the absorption of the excess of material. And yet for thousands of years this simple method of nature was set aside by man's contrivance, and wounds were deluged with oil and wine and various unguents, which substituted suppurative inflammation for the adhesive process, and both aggravated and prolonged the patient's suffering. But if nature is so efficient in healing external lesions, we must presume that she exerts the same power in diseases of internal organs, for the elements involved are essentially the same in both. But even more than this, a little observation informs us what is the method she adopts to prevent the development or extension of morbid processes, and to reduce their activity."

Under the heading "the avenues through which medicines are introduced," are discussed the various methods of medication, such as infusion or injection into the veins:—by the stomach, which is the organ best adapted by nature and the one most usually employed:—the *rectum*, as by injections; and here are considered the facts attested by Pereira, Trousseau, Richter, and others, of the influence of various drugs when given per anum, and the doses necessary; some requiring the dose to be increased when thus administered, others being equally efficacious, while

some, as acetate of lead, exert only a local influence. The skin, as a means of administering medicines, is very frequently employed; and when the importance of this organ as an absorbing medium is considered, it is to be wondered that physicians do not more frequently resort to medication by the skin. It must be remembered that as a general rule medication cannot be relied on through the skin. Some medicines, as rhubarb, jalap, croton oil, tartar emetic, and some others, appear to exert trifling action when given in this way; not invariably so, however, as the writer can testify, as in a case of phthisis, recently under observation, he was obliged to discontinue the use of a croton oil liniment which had been prescribed, as it apparently exerted its purgative influence; the purging was for some hours most distressing, and only ceased on giving large and continued doses of morphia. The effect of the croton oil in this case was not at first recognized, as the purging was regarded as of other origin. At the end of a few days the croton oil was again rubbed on the chest, and again followed by most violent and alarming purgation. We may state that the local irritant action of the drug was almost *nil.*

Medicated vapors, or medicines by inhalation, have been used from the time of Dioscorides and Galen, more especially in pulmonary complaints; and recently the pulverizer of fluids has been invented, and put in full operation. By this instrument various medicated waters are thrown into a fine spray, so as to render them capable of inhalation. It has been proved that these vapors do enter the lungs; and secondly, that although vapors generated by heat do not contain the fixed principles of mineral waters, yet that these principles do exist in vapor produced by pulverization. Under the heading "the art of prescribing," are contained many most useful hints not to be found elsewhere. As the author truly observes:

"The successful practitioner is not he who, besides possessing diagnostic skill, is abundantly furnished with medical prescriptions for all diseases, but he who, in every case, knows not only what are the remedies adapted to remove the dominant and permanent morbid element, but also what are the appropriate means of dissipating every subordinate derangement and of influencing every function in such a way as to concur in the prime object of bringing the disease to a safe termination. This is a knowledge which can be very imperfectly obtained from books. It is the result, in most cases, of long practice in medicine by a man whom nature has fitted for its attainment. Few physicians are so highly endowed. It can only be communicated to pupils by a skilful teacher in daily, or still more frequent, visits, at the bedside of the sick. We renounce, therefore, any attempt to reduce such knowledge

to written rules. In this place, we shall merely endeavor summarily to describe the conditions affecting the successful employment of medicines which arise out of the mode in which they are administered."

The arrangement of the work consists of the description of the entire subject under twelve separate heads or classes; such as, class 1, Lenitives; 2, Astringents; 3, Irritants; 4, Tonics; 5, General Stimulants; 6, Cerebro-Spinal Stimulants; 7, Spinants; 8, General Sedatives; 9, Arterial Sedatives; 10, Nervous Sedatives; 11, Evacuants; and 12, Alteratives. Before entering on a description of the remedial agents under each heading, there is given a general view of the *modus operandi* of each class.

We have already extended this review beyond our limits: we cannot however conclude without according our hearty congratulations to Dr. Stillé for having produced a work in every respect worthy of acceptance by the medical profession. To the physician in active practice there is no work in which he will more fully ascertain the therapeutic action of any special remedy; and to the student, these volumes supply a want which has been sorely felt during the last few years. The publishers deserve every commendation; the typographical execution is in the highest style of art, reflecting credit on those under whose auspices the work has been laid before the profession. It is to be had of Dawson Bros., Great St. James Street.

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*The Functions and Disorders of the Reproductive Organs in Childhood, Youth, Adult Age, and Advanced Life, considered, in their Physiological, Social, and Moral Relations.* By WILLIAM ACTON, M.R.C.S. Eng.; Fellow of the Royal, Medical, and Chirurgical Societies. Philadelphia: Lindsay & Blackiston, 1865. Pp. 269. Montreal: Dawson Brothers.

The influence which the sexual passions exert over mankind is greater than any other; and so frequently is the physician or surgeon consulted on matters connected therewith, that it becomes his absolute duty thoroughly to understand the subject, and to do so he must patiently examine everything which can possibly give him light. Mr. Acton was for several years a pupil, and then an assistant, to the celebrated Ricord, of Paris, and beyond a doubt he made a good use of the ample means then at his disposal. His work bears evidence that on this particular subject he is an enthusiast; in fact, his whole life has been devoted to it. He has written a very valuable book, the greater part replete with valuable information and hints to the practitioner. Yet there are some portions of it that we cannot conscientiously commend. Mr. Acton,

in writing his book, beyond a doubt did not intend it solely for the medical profession. His treatment of the social and moral relations of the question would have been much better omitted, and the book made entirely for the medical reader. This portion of the work has too many "cases," which, we fear, will do anything but serve the purpose they are intended; and many of the deductions he draws therefrom are erroneous in our opinion. It is a dangerous thing to allow works of this kind to fall into the hands of the general public. For one that will read and be benefited, twenty will only have their passions more thoroughly aroused. It is astonishing how great the desire among the public is even to get purely technical works on any subject connected with the sexes. At a recent auction sale in this city of medical works, books on midwifery and diseases of the female organs were bid up to prices beyond their value by young men not out of their teens, and knocked down to them. Save this error, then, (which is one of the head and not of the heart, for Mr. Acton is evidently a most conscientious man, and believes he is acting for the benefit of his fellow-creatures,) the work is really a valuable one. All medical men are aware at what a very early age the sexual passions are sometimes aroused, and the baneful results which almost invariably follow. Our author takes up many of the social conditions of life which tend to bring about this sad state of things; but one of the most constant, in our opinion, he seems to have overlooked. We cannot but believe, that the habit of allowing young children of the two sexes to sleep in the same bed is an evil fraught with gigantic results. Our author says:

"My own opinion is, that a long prepuce in children is a much more frequent cause of evil habits than parents or medical men have any idea of. The collections of smegma between the glans and the prepuce is almost certain to produce irritation. But I have never heard of any steps ever having been taken by those having the care of youth to induce boys to adopt proper habits of cleanliness in this respect. Children are educated to remove dirt from every other part of their bodies (where it is of less importance in its consequences than it is here). But probably no nurse, parent, schoolmaster, or even doctor, would at first relish the proposal that a boy of twelve in his bath should be told (for if not told he will not do it) to draw back his foreskin and thoroughly cleanse the glans penis every day. In my own experience of children, I have found this practice so beneficial, that I never hesitate to recommend it in any cases where there is the least sign of irritation from this cause."

*Manual of the Medicinal Preparations of Iron, including their Preparation, Chemistry, Physiological Action and Therapeutical Use; with an Appendix containing the Iron Preparations of the British Pharmacopœia.* By HARRY NAPIER DRAPER, F.C.S. Dublin: Fannin & Co. 1864.

This volume consists of 130 pages, and contains the mode of preparation and use of all the officinal and unofficinal preparations of iron. To the practitioner in the country, who prepares many of his own remedies, a work like this would be of great value. The author, in his preface, says:

"The object which I have endeavored to attain in the following pages may be explained in very few words. Of late years it has become customary to multiply to a perplexing extent the compounds of the inorganic bodies employed in medicine. It is no part of my intention to criticise this feature of modern pharmacy, or to advance any opinion of my own as to the desirability of a system which, while it has certainly led to the introduction of some very elegant and efficient preparations, has at the same time imposed upon the prescriber the troublesome task of choosing between a great variety of forms of the same remedy, and has rendered it imperative upon the pharmaceutist to keep prepared a collection of salts, solutions, syrups, *et hoc genus omne*, which are in many instances very perishable.

"There is perhaps no remedy to which these remarks more forcibly apply than to the metal iron. Of repute in the treatment of certain diseased conditions from almost the earliest period from which history hands us down any record of medicine, it has continued to acquire popularity, until in our own time we find it holding among therapeutic agents a position not second to that of any other substance. This is without doubt due to the circumstance that iron is one of the few remedies, the action of which is to a certain degree understood, and which, on scientific principles, combats abnormal conditions which can be traced to their origin.

"The plan of arrangement adopted is as follows. The salts are placed in alphabetical order as being the most convenient for reference. Each compound is treated of under distinct heads. Firstly, its preparation is detailed, the best process being selected, or in some cases, as in that of *Reduced Iron*, all the published processes are introduced; secondly, its physical characters; thirdly, its chemistry; fourthly, its contaminations and the tests by which their presence may be determined; fifthly, its physiological action and therapeutical use; and sixthly, the dose in which it may be given. Lastly, formulæ of pills, syrups, and other preparations into which the compound enters, are added."

*Elements of Physiology and of Disease.* By ED. MAPOTHER, M.D., Prof. of Hygeine, R. Col. Surgeons, Ireland, &c., pp. 567. With one hundred and fifty Illustrations. Second Edition. London: Longman & Co. Dublin: Fannin & Co.

A second edition of this popular manual has been called for in eighteen months, and has become the standard students' book in all the Dublin, and many of the London schools. It differs from all other manuals in combining general pathology with physiology, and we think the idea is good, as it gives the student an interest in details, otherwise often dry and unattractive. The work is concise and well arranged, so that scarcely a single fact of these sciences is omitted, but this renders it a work of constant reference and requiring attentive perusal.

Dr. M. is careful in assigning the authority for every statement, and is particularly just to his co-laborers. The illustrations are excellent, chiefly copied from the works of the German microscopists; and a copious and accurate Medical glossary is added to this admirable students' book.

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*Life, Health, and Disease; a Compendium of Modern Physiology.* By ROBT. HENDRY, L.F.P.C. Helensburgh, Scotland: William Campbell, printer.

This little volume was forwarded to us through the post, for which we thank the publisher—an old and highly esteemed friend. It is a really excellent little book, intended for public circulation, and will doubtless accomplish good. It is neatly printed, as might have been expected, the publisher being a thorough practical Scotch printer.

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## PERISCOPIC DEPARTMENT.

### Surgery.

#### HINTS RESPECTING THE EXTRACTION OF FOREIGN BODIES FROM THE EAR AND NOSE.

By S. D. GROSS, M.D., Professor of Surgery in the Jefferson Medical College of Philadelphia.

All writers upon the diseases of the ear speak of the great difficulty that is generally experienced in removing foreign bodies from the auditory tube. Von Tröltsch, whose work has recently been reproduced in this country, and whose sentiments may be regarded as expressive of the latest views upon the subject in Germany, has uttered this remarkable sen-

tence: "Generally the presence of these bodies in the ear is less injurious than the attempts to remove them." This language, written a little more than a year ago, is full of significance. It clearly shows how incompetent medical men generally are to perform apparently so trifling an operation. Proceeding a little further on, the reader of Von Tröltsch's work meets with another curious sentence. "If," says he, after alluding to the swollen condition of the ear, and the impossibility of dislodging the intruder with the syringe, "a case came under my observation where an impacted body produced such symptoms as to indicate an energetic mode of treatment for its removal, and delay was not practicable, I should hasten to extract it by an operation, by making an opening through the wall of the meatus, so as to admit of its being approached and seized from behind." In speaking of the difficulties of such a procedure, he adds: "I have, however, satisfied myself on the dead body that it is easy to separate the auditory tube from the squamous portion of the temporal bone, and thus with a curved aneurism needle reach the membrane of the tympanum. The operation is doubly easy in children in whom there is hardly any bony canal." The means which Von Tröltsch recommends in ordinary cases for effecting dislodgment of foreign bodies are Daviel's curette and injections of water.

"Rude efforts," says Mr. Wilde, "made to extract foreign bodies from the ear are as likely to cause mischief as these bodies themselves." The means which he advises for accomplishing the object are the syringe, curette, spatula, and toothed forceps.

Mr. Toynbee, no mean authority upon any subject relating to the diseases of the ear, in speaking of the extraneous substances in this organ, remarks: "Cases are sometimes met with in which the most lamentable results have followed attempts at removing foreign bodies by instruments. Death itself has not infrequently happened; and where the life of the patient has been spared, the ear has sometimes been destroyed and the portio dura nerve paralyzed." The syringe and tepid water are the means upon which Mr. Toynbee chiefly relies for the removal of all rounded solid substances. For the extraction of wool, cotton, paper, rags, and other soft material, he employs, when injections fail, a pair of leverring forceps, an instrument of his own invention.

The above passages, representing the views of three of the most distinguished aurists of the present day, are quoted for the purpose of showing the most approved methods of extracting foreign bodies from the ear, and the violence that is often inflicted in rude attempts of this kind. From the fact that the works of these authors, especially those of Wilde and Toynbee, have been widely circulated in this country, it may fairly

be assumed that the practice inculcated in them is the one generally pursued by our medical men. Not long ago I read in the report of a discussion before a learned body in a neighboring city, that the best instrument for extracting a foreign substance from the auditory canal was an ordinary pocket probe bent at the extremity; and, as the remark was made by a distinguished professor, I take it for granted that he is not the only surgeon in this country who thinks so.

For a number of years past, I have entirely limited myself, in the extraction of foreign bodies from the ear, to the little instrument delineated in the accompanying sketch, originally described in my System of Surgery, and now regularly put up in all the ordinary pocket cases manufactured in this city. Composed of steel, and therefore entirely inflexible, it is about five inches and a quarter in length, very light and delicate, cylindrical and somewhat rough at the middle, to afford a good hold for the thumb and fingers, spoon-shaped at one extremity, and furnished with a little tooth or prong at the other. This tooth, which projects at a right angle from the shank of the instrument, is exceedingly small, and therefore admits easy insinuation between the foreign substance and the auditory canal. The curette or spoon is also very delicate, and bent considerably more than the ordinary cataract curette. Provided with such a contrivance as this, no surgeon, however unskilful or inexperienced, can possibly fail in his object.

The plan which I always adopt, when a case of foreign body in the ear is brought under my notice, is to place the patient in an easy recumbent position, with the head slightly raised upon a pillow, and to administer chloroform to the extent of entire obliviousness. This is absolutely necessary when the patient is a child, or a nervous, excitable adult. The operation is greatly facilitated if there is a clear light, although this is by no means indispensable. Taking hold of the upper and back part of the concha, and pulling it gently so as to efface the curve at the entrance of the ear, I carefully pass the narrow extremity of the pick sidewise between the intruder and the wall of the meatus, and bringing the little tooth or prong behind it, I readily jerk it out, no matter how deeply it may be buried by a kind of lever movement with the handle of the instrument. The operation is generally the work of a few seconds, and is altogether free from hemorrhage. No possible injury can be inflicted upon the meatus, much less upon the membrane of the tympanum, if proper caution is used in the management of the pick. In this manner I have extracted quite a number of substances of various kinds, as pieces of slate pencil, grains of corn, beads, pebbles cherry-stones, in most cases after vain attempts at relief had been made by practitioners and others. When the substance is

very small, the object is sometimes most readily attained by the use of the curette, but in general the prong is altogether preferable, whatever may be the form, size, or consistency of the body, whether round or angular, small or large, hard or soft. A pebble, grain of coffee, bug, or pellet of paper, wool, or cotton, may all be equally easily extracted. Ear-wax, however hard, or however firmly impacted, is more readily removed with such an instrument than with any other contrivance of which I have any knowledge.

Insects may, in general, be readily dislodged by filling the ear with water or oil, which has the effect of suffocating them. When they are dead, they may be promptly extracted in the same manner as any other extraneous matter.

There are certain rules to be observed in the extraction of foreign bodies, no matter what means may be employed for the purpose. In the first place, the surgeon should be perfectly satisfied that there really is an extraneous substance in the ear; or, in other words, that the patient is not laboring under a false alarm. Such an occurrence is by no means uncommon, especially when the individual is a nervous, excitable female, impressed with an idea that a bug has passed into the ear, or that the head of a pin has fallen into it. A careful inspection with the aid of a good light, either solar or artificial, will be the safest guarantee against any error of this kind.

Secondly. The meatus should never be meddled with when, in consequence of previous efforts at extrusion, it has become severely inflamed and more or less swollen. Here the proper plan is to wait until, by leeches to the inside of the tube, active purgation, light diet, and other measures, the morbid action is sufficiently subdued to admit of the requisite manipulation. The want of this precaution has sometimes led to violent inflammation, seriously imperilling life. The ear, if left alone, is generally remarkably tolerant of the presence of foreign bodies, even when rough or of large size. Not long ago I removed, at the clinic of the Jefferson Medical College, a large cherry-stone, which had been lodged deep in the meatus of a little girl for seven years, without any other inconvenience than slight occasional dizziness.

Thirdly. The foreign body is sometimes concealed by blood, pus, or cerumen, thus necessitating the use of the syringe and tepid water, before an attempt is made at extrusion.

Fourthly. The after-treatment should be conducted upon general antiphlogistic principles. Ordinarily little, if anything, is required. It is only when the parts have been rudely handled that active measures will be needed, and even then the case will usually yield to a brisk purgative,

and the application of a few leeches to the meatus, along with a few doses of Dover's powder. Should the brain be threatened, blood must be freely taken from the arm. The syringe with tepid water, simple or medicated, will be required if there is any considerable discharge of matter, especially if it is offensive and irritating.

I do not wish to be understood, from what precedes, to say that I disapprove of the use of the syringe for the removal of foreign bodies from the ear. The operation, if properly performed, is frequently crowned with success; but it is often tedious, always disagreeable, and sometimes wholly inadequate. Wool, cotton, paper, cloth, and similar articles may often be easily and successfully removed with the forceps. As to the pocket probe, bent at the point, no one who knows anything of the nature of such an operation would ever think of employing it. The idea of separating the auditory canal from the squamous portion of the temporal bone, with a view of obtaining access to the extraneous substance, as suggested by Von Tröltsch, is so absurd that it ought to be ranked among the exploded notions of the barbarous ages.

The removal of foreign bodies from the *nose* is usually, in the hands of the general practitioner, an operation of great difficulty; quite as much so, indeed, as the withdrawal of an extraneous substance from the ear. The efforts that are made to accomplish the object are commonly of the most misdirected and herculean character; the struggles of the patient, ordinarily a child a few years old, are violent, if not, uncontrollable, and the result too often is a bloody fruitless battle, not less distressing to the parents than discreditable to the surgeon. This is not an exaggerated picture. A practice of upwards of a third of a century has afforded me many unfortunate illustrations of its truthfulness; and yet the operation, if properly performed, is one of the most easy and simple in surgery. As commonly executed, its effect is, not extrusion of the foreign body, but its further and deeper impaction in the nose. The instruments generally employed are the forceps, a grooved director, or a probe bent at the extremity. Need we be surprised that frequent failure should be the result under such circumstances? The extraction of an extraneous substance with such contrivances is altogether a blind procedure. The surgeon who succeeds with them deserves great credit for his good luck; for, really, it amounts to nothing else.

My practice in these cases is simply this. In the first place, the child must be properly secured. If he is very strong and rebellious, he should be wrapped up in a sheet or apron, to prevent him from using his hands and feet. Chloroform is seldom necessary. The head, inclined slightly backwards, should be immovably fixed by an assistant, while another

assistant holds the patient upon his lap. The small extremity of the "ear-pick" is then carried flatwise upwards into the nose in the direction of the bridge, until it is fairly beyond the foreign body, when, the point being depressed, the little hook or tooth is at once brought in contact with the substance, and extrusion effected by a kind of jerking or wriggling movement of the thumb and fingers. The operation is generally over in a few seconds. Trouble can arise only when the substance, in consequence of previous abortive efforts, has been pushed back into the nose, or when, as occasionally happens, the nostril is filled with blood. I have myself never encountered the slightest difficulty with the instrument in question, and believe that failure in any case is impossible, if it is judiciously used.

Practitioners generally do not seem to be aware that foreign substances in the nose are commonly situated very superficially. In most cases, they occupy the entrance of the nostril, resting against the anterior extremity of the inferior turbinated bone, or between this bone and the nasal septum. It is seldom that they are pushed by the child into either of the chambers of the nose, even when they are of small size. If rude and protracted attempts, however, have been made at extraction, the probability is that the body will be found upon the floor of the nostril, or firmly wedged in between the turbinated bone and the nasal septum. In such an event, the operation will be more difficult, but still perfectly feasible. In a case under my charge not long ago, the substance, a small bean, had been pushed far back into the inferior meatus, and I was in doubt, for a few moments, whether it could be reached. Keeping the point of the instrument in close contact with the surface of the turbinated bone, I soon succeeded in passing it beyond the extraneous body, which was then extracted with the greatest facility.

As foreign bodies in the nose are invariably productive of more or less irritation and fetid discharge, they should always be extracted as speedily as possible. In a case reported by Dr. Hays, the able editor of this journal, the substance, a glass button, kept up incessant inflammation and suppuration for upwards of twenty years. Its extraction was followed by a speedy cure. Whenever a young child is brought to a surgeon with a fetid discharge from the nose, especially on one side, a careful search should be made for the presence of an extraneous substance. A few months ago, a stout, fat child, twenty-one months old, came under my observation on account of a very profuse and offensive profluvium from one of its nostrils. Suspecting the existence of a foreign body, I carefully explored the affected cavity with my instrument, and, much to the surprise of the mother, brought out a large paper pellet.—*American Journal of Medical Science.*

# Medicine.

## CASE OF EMPYO-PNEUMOTHORAX, WITH SOME PECULIAR SYMPTOMS—DISSECTION.

Under the care of Dr. Benson. Reported by David B. Hewitt, L.R.C.S.I.

McDonnell, aged 24, a servant, states that he has usually enjoyed very good health, has been of temperate habits, and has not at any time been much exposed to cold or wet.

His father and mother are alive and in good health, and none of the family are at all consumptive. He never spat blood, nor suffered from any other symptom that would lead one to suspect that he had any pulmonary disease, except that some time ago he had a pleurisy in the right side, and he has had a slight cough for the last two or three months.

Early in the morning of the 17th February he was attacked with a violent pain under the right nipple, shooting up to the shoulder. He went about his work, but was soon compelled to return home, when he had a severe rigor, and he says the shivering was then so violent that he felt as if he could sit on the fire; he was also attacked with great difficulty of breathing and weakness. Not having obtained any relief from the symptoms, he was admitted into the City of Dublin Hospital on the 19th February, under the care of Dr. Benson.

The patient is of low size, with light hair and sandy whiskers; his face is pale, and indicative of distress; his breathing quick and short, 42; pulse 140 in the erect posture, 120 when he is recumbent; it is regular, but weak. He complains much of pain on inspiration. Tongue moist and creamy; secretions normal. His chest does not appear sunken nor in any way contracted on either side, neither are the clavicles unduly prominent, nor is there any general or partial dilatation of the chest. On deep inspiration the left side seems to expand a little more than the right, but this is not apparent in ordinary respiration. There is a slight shade of dulness on the right side anteriorly, but when he sits up the lower part of that side yields a decidedly dull sound. On auscultation the respiratory sounds are very obscure all over the right lung, very little air appearing to enter, although the side expands well, and there is much of it quite clear, though not tympanitic, on percussion. There is puerile respiration on the left side.

The patient being placed on his face, and the stethoscope applied between the sixth and eighth ribs, a little to the outside of the angles, a sound is heard on inspiration like that made by a person blowing into a

Florence flask, and when he speaks, his voice, as communicated to the ear, is of a distinctly amphoric character, followed by a loud echo.

Habeat vesicatorium lateri dextro applicandum.

℞ Pulv. ipecac. comp.
Pulv. ant. aa. grs. vi.
Calomel. gr. iii. M.

Pt. massa in pil. vi. divid. sumatur una 3tia quaque hora.

Feb. 20th: He is a little better, and complains much less of the pain. Respirations 36; pulse 116, very weak and compressible. Ordered wine, beef-tea, &c. Rept. pilulæ.

21st. The dyspnœa is much less urgent; pulse same as yesterday. The dulness on percussion at the base of the right lung, when he is in the sitting posture, is much greater to-day; it is, however, replaced by a sound which is almost tympanitic when he lies on his face, indicating the presence of liquid which gravitates, and of air which, floating, gives rise to the hyper-resonant sound. In this position, also the amphoric breathing, voice, and echo, are best heard, and when he takes a deep inspiration, metallic tinkling may occasionally be distinguished. When shaken, while on his hands and knees, the ear being at the same time applied to the chest, a loud splash is audible.

22nd: Breathing much easier; his countenance is more tranquil; amphoric voice not so well marked; no tinkling nor splashing sound audible. Respirations 36: pulse 120, weak and compressible.

From the above date until the day on which the succeeding note was taken nothing of interest arose in the progress of the case; the pulse diminished a little in frequency, and the amphoric sounds remained slightly audible. His appetite was pretty good, and as Dr. Benson thought that the chief indication was to support his strength, he was ordered a liberal diet—viz., mutton, porter, wine, bread and milk in the day, and punch at night.

March 7th: *Amphoric sounds are not audible in any position.* Splashing sound on succussion is still very well marked. Pulse 120, more full than before; respirations 32. He states that he feels much stronger.

16th: Complains much of a chill in the evenings, and that he perspires a great deal at night from the entire surface of the body. He has a slight cough.

℞ Decoct. cetrariæ, ℥ v.
Syr. tolut. ℥ ss.
Acid. sulph. dil. ʒ i.
Vin. ipecac. ʒ i. M.

Sumat. coch. amp. 2tia quaque hora.

23rd: There is still air and liquid in the cavity of the pleura, as, in whatever position the patient may be, the dependent parts of the right side are very dull, while those uppermost yield a morbidly clear sound.

Pulse in a recumbent posture - - 130
Pulse in sitting posture - - - - 144
Pulse in upright position - · - - 160

April 1st: The voice is slightly amphoric when heard in the subaxillary region.

4th: The patient's countenance is much clearer and more indicative of ease; he is gaining flesh, and his appetite is improving; he perspires a good deal at night. The heart is pushed over to the left side, the apex pulsating an inch to the left of the nipple: the sounds are perfectly normal.

℞ Olei morrhuæ, ℥ iv.

Coch. minimum ter in die sumend.

17th: He has taken the cod-liver oil for nearly a fortnight, gradually increased to a tablespoonful each time. It has agreed well with him, and he has gained flesh under its use.

℞ Syr. ferri. iodidi, ℥ ij.

Coch. parvum ter in die cum oleo morrhuæ.

19th: Complains much of soreness of the right side, produced apparently by the pressure of the fluid, which has been increasing in quantity. This was subsequently much relieved by the application of belladonna plasters. The amphoric sounds have entirely disappeared, but the Hippocratic fluctuation is so well marked that it may be distinctly heard when he turns suddenly in bed. The excessive clearness on percussion yielded by whatever part of the right side might happen to be uppermost has been replaced by marked dulness, except over a circumscribed area under the right nipple, and another at the base of the right lung, where the sound on percussion is well nigh tympanitic in every position of the patient.

May 3rd: The dulness is becoming more general; the pulse is very rapid, and a loud systolic murmur, rather rough in its character, is to be heard now for the first time at the apex of the displaced heart. The right side seems larger, both antero-posteriorly and circumferentially, than the left; the intercostal spaces bulge out considerably.

From this date the liquid gradually increased in quantity; he complained, from time to time, of a feeling of oppression in the left side, which was evidently produced by the pressure of the accumulating fluid on the healthy lung; the pulse became even more rapid, and the dyspnœa more urgent, so that Dr. Benson, in consultation with Drs. Geoghegan and Croly, determined to have the fluid drawn off.

Accordingly, on the 31st, Mr. Croly, having made an incision about an inch in length along the upper edge of the fifth rib, at the origin of the serratus magnus, through the integuments and fasciæ, introduced a trocar into the cavity of the pleura. In doing this, considerable difficulty arose from the thickened state of the pleura, which also prevented the point of the instrument from being distinctly felt when projected against the parietes from within in an intercostal space lower down through which it was intended to pass a drainage tube.

On withdrawing the stilet, there was a rush of fœtid gas through the canula, followed by a flow of purulent matter, amounting to about three pints. It was then determined to enlarge the opening into the pleura so as to allow the fluid to drain away as it collected. A fold of lint was placed over the opening, a broad bandage round the chest, and the patient was put to bed and got four ounces of wine. Immediately after the operation he experienced considerable relief, the oppressive dyspnœa which he had suffered from for several days being replaced by comparatively easy breathing; he felt very weak, however, and complained a great deal of the soreness of his side. On measurement, the side was found to have decreased greatly in girth, being two or three inches less than before the operation. On the following and succeeding days the bandage was removed both morning and evening, and the side dressed. When he sat up, inclining slightly to the right side, and coughed, there was a flow of purulent matter from the opening; this, however, gradually decreased in quantity, and it soon became evident that the opening was closing. At the same time he felt his breathing easier and his strength increasing. Still the pulse remained very quick and weak; the systolic murmur at the apex of the heart was no longer audible.

On the 11th of June, the discharge from the opening having been almost *nil* for two or three days, there was suddenly a tremendous gush of horribly fœtid pus, accompanied by equally fœtid gas, the former amounting to about two quarts.

For some time there was a free discharge from the opening of a very fœtid nature. The thorax was wrapped in a folded sheet, this being found to be the best, and to the patient the most agreeable method of dressing, and this was renewed three or four times in the twenty-four hours. So fœtid was the pus, that it was only by means of quantities of chloride of lime, and having the windows open night and day, that the ward could be kept at all bearably free from the smell, which was rendered still worse by the very hot weather then prevalent. Notwithstanding this, combined with the great drain on his system, the patient improved, his appetite was very good, his tongue clean, and the bowels even costive. He con-

tinued taking the cod-liver oil and syrup of the iodide of iron, which agreed pretty well with him.

On the 15th of June, Dr. Benson was surprised to find that under the right clavicle, down as far as the fourth rib, was quite tympanitic—this was persistent in every position of the patient—while the adjoining parts of the chest were quite dull. This phenomenon continued for some days, and then became gradually refined down into almost the normal sound yielded by the other lung. Slight respiration might be heard in the interval between the angles of the ribs and the spine; this Dr. Benson attributed to the conduction of the sounds along the parietes of the chest from the healthy lung.

Towards the end of June the opening again manifested a tendency to close, the discharge decreased, he felt much oppressed, and it became evident that the fluid was once more collecting, so that it was thought advisable to have an opening made that would allow a free exit of the puriform fluid, and at the same time not be likely to close up.

On the 2nd of July the opening was enlarged to the extent of two inches, when much gas and some fluid was liberated, which gave the patient decided relief.

The copious discharge every day soon began to tell upon the patient's strength and appetite, his pulse became faster, and his face, which hitherto was plump, began to get thin, and he could not take the oil as well as before.

On the 19th of July he complained that the bowels, which, during all his illness hitherto, were costive, were now too free, and also that he had much pain in the hypogastric region. He was ordered chalk mixture and opium.

On the 20th, the diarrhœa was unchecked, the motions were frequent and watery, he had lost ground to an extraordinary degree, his cheeks were pale and sunken, and he felt very feeble. Ordered punch, wine, &c., ad libitum.

℞ Acetatis plumbi. grana quindecim.
Aceti destillati. ʒ i.
Liquoris acetatis morphiæ, ʒ i.
Aquæ destillatæ, ad ℥ viii. M.

Sumatur cochleare amplum post singulas sedes.

21st: Diarrhœa slightly abated; complains much of thirst.

23rd: Diarrhœa still continues, and is evidently running him down very fast. Evacuations watery, accompanied by some pain during defecation. Meat to be discontinued. Mulled port wine to be freely given.

℞ Acetatis plumbi, gr. vi.
Pulveris opii, gr. vi. M.

Divide in pilulas, sex sumat unam secunda quaque hora. Habeat vesicatorium epigastrio.

On the morning of the 24th, the diarrhœa had very much abated, only two motions during the night; he is, nevertheless, greatly enfeebled; pulse rapid and thready. About two o'clock, the patient having endeavored to get out of bed, fainted, and it was only by pouring hot punch down his throat that he was at length revived. He never rallied perfectly, and about four o'clock he passed away without a struggle.

*Autopsy eighteen hours after death.*—On raising the sternum and costal cartilages some very fœtid gas escaped from the right pleural cavity. The lining membrane was found greatly thickened, and its free surface covered with a thick purulent exudation. There were about three or four ounces of fœtid pus lying in the depression between the bodies of the vertebræ and the angles of the ribs. The lung was seen, not larger than an ordinary human heart, lying on the side of the vertebræ, and bound down by layers of lymph. It was of a peculiar nodulated appearance externally. Some of the elevations were as large as a walnut and pretty hard. Diligent search was made for any marks of a cicatrix os fistula, but without success. On cutting into the lung, it was found to present a most excellent example of carnification, the section of the knoblike elevations presented some well-marked tubercular deposits that had not undergone softening. There was not the slightest trace of the presence of a cavity, either recent or old, and there was not much tubercle to be found; no air could have entered the lung; its section was precisely like that of a muscle.

The left lung was found to be scattered over with small hard deposits of tubercle to a much greater degree than the right; but there was no cavity, nor any trace of softened tubercle. The heart was of normal size, and the valves were found healthy, with the exception of a trace of thickening in the mitral, which, however, was so slight as not to be easily recognized.

The side was very much contracted, the ribs having fallen in to a great extent, yet there was an immense cavity filled with air and lined with a false membrane, which acted as a pus-secreter.

The foregoing case presented some peculiarities, to which Dr. Benson directed attention in his clinical observations:

1st. The symptoms and physical signs plainly showed that this was a case of empyo-pneumothorax arising from a communication with the lung.

2nd. The communication most probably occurred two days before admission into hospital.

3rd. The total absence of any symptoms of previous pulmonary disease created a doubt as to the cause of this communication. Could it have been, as is most usual, the bursting of a tubercular abscess? No preceding symptom favored this view, nor did any dulness on percussion in the upper part of the thorax support it, yet this was considered the most probable cause. Had the pleurisy which occurred some time before anything to do with it?

4th. It was remarkable that tympanitic clearness on percussion was to be heard for some days in situations and under circumstances not easily accounted for, as at the base of the right lung, where dulness generally prevailed. It did not appear to depend on the stomach.

5th. The murmur at apex of heart was a very rare, if not unique phenomenon, caused, as would appear, by the displacement of the organ. It could not be anæmia, it was too rough for that, and it was not heard at the base, and it ceased as soon as the heart recovered its normal position. Semilunar murmurs are sometimes occasioned by displacement of the heart, but not mitral ones.

6th. The post-mortem did not reveal any abscess; but there were tubercles in the lung, not enough perhaps to produce decided symptoms of phthisis before the occurrence of the pneumothorax, but yet such that one of them might have penetrated the pleura pulmonalis before it had formed adhesions to the pleura costalis, or was capped with layers of lymph, in which case the air might slowly get into the pleural sac (with a little pus), as we may suppose was the fact, from the mild way in which the pneumothorax set it. The further development of tubercle in that lung was prevented by the pressure exercised upon it by the air, which caused its collapse and carnification. The other lung, "the sound one," contained a greater number of tubercles, and in a more advanced state.

7th. This patient lived longer than the average time, and we may conclude that he owed this to the fact that he had very little tubercular disease when the pneumothorax commenced.

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## THE TREATMENT OF LACERATION OF THE PERINÆUM INTO THE RECTUM DURING PARTURITION.

By Dr. T. Robinson.

In the *Medical Times and Gazette*, August, 1861, I drew attention to the succesful treatment of severe laceration of the perinæum and rectum by simple means, adapted to retain the parts in undisturbed approximation, and allow union by first intention. Subjoined is another instance of the success of this plan. In this case the rectum and vagina

were made one large opening, the rent, two days after the accident, being several inches in length.

The subject was a primipara, aged 30 years, with a vagina so small that the conjugal rite could not be consummated until artificial means to dilate it had been resorted to. At the full period of gestation labor came on, and after twenty hours of steady natural uterine action a large dead child was born. The vagina preserved its integrity during the passage of the head, which was very soft and pliable, and of low temperature. Death had occurred probably a few days before. The shoulders were delayed some time on the fourchette, and at length suddenly expelled by a violent uterine effort, laying open the vagina into the rectum to a most formidable extent. On the second day, observing that fæcal matter had passed through this recto-vaginal opening, I cleared out the intestines by an aperient, and afterwards gave opium, and adopted a limited diet containing very little solid matter—so that the descent of fæces into the rectum might be retarded,—and having washed the parts free from all excrementitious matter, I bound the knees together, and desired the patient strictly to avoid all movement of the lower half of the person, to maintain the parts undisturbed. This plan was pursued during eight days, when a general union was apparent; an enema to unload the bowel was given, and the patient allowed to get out of bed. From this time she might be considered recovered; the parts have continued sound and whole to the present date—a period of two months.

That laceration of perinæum, short of implicating the rectum, is a common accident, and may be left entirely to nature with safety, is an axiom in midwifery substantiated by daily experience; and I wish to impress that very extensive injuries opening up the rectum may be cured by adopting means to prevent the torn surfaces being disturbed, and to induce healing by first intention. The means for attaining this object are, first, keeping the patient for several days on food containing very little solid matter, which in its descent into the rectum would disturb healing; secondly, opium daily to constipate the bowels; thirdly by preventing movement of the lower limbs as much as possible. At first the knees should be bound together. Patients become very weary of this after two or three days, and it may be discontinued, or was done in the above and other cases I have had—it being forcibly impressed on them that they must not separate the thighs,—cautious flexion is not hurtful.

Should these means fail, we can then have recourse to " paring and stitching," with the usual chance of success.—*Medical Times and Gazette.*

# Canada Medical Journal.

MONTREAL, JANUARY, 1865.

Ere this number reaches our readers the year 1864 will have passed away. During its passage our *Journal* was started at the urgent solicitation of many practitioners who felt the want then existing, for the establishment of a medical periodical, which it was hoped would receive the support of the entire fraternity, and become the organ of the medical profession in Canada. On our part we promised no effort would be wanting to make the *Canada Medical Journal* worthy of support. Six numbers have already been issued, and they are sufficient to illustrate how far we have kept our pledge. To those who have contributed original communications we give our hearty thanks, and trust that in future they will not forget us. We appeal, to those who have not favored us yet, we trust not in vain, for some records from their experience. With regard to the success that has attended our efforts, we can only state that our subscription list is amply large to repay our expenses, provided there are no defaulters. With these few remarks we heartily wish our readers a very happy new year and all the compliments of the season.

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It appears that the proposal, contained in a former number of this journal, to establish an officer of health for our city, is likely to miscarry; it is a suggestion which sooner or later must be entertained.

We have alluded to the imperfections existing in our system of registering births, marriages, and deaths. As the law at present applies, a person can pass through all three stages without the evidence of his very existence appearing on our records. This is an assertion which may at first stagger the reader, but it is nevertheless true in every particular. There is no law rendering it obligatory on all physicians, midwives, or parents to register the birth of a child within a given period; and were it not from respect to the teachings of religion, one half the children born would never be enregistered; as it is, many children are baptized whose names never appear in the public register, a fact of significant importance,

taken in connection with the evil results which may follow, causing endless litigation and misery to individuals. In proof of the above allegation we can give a case in point. A personal friend succeeded to property,—he was obliged to prove that he was the grandson of the testator. No evidence of his baptism or registration existed, so that he had to fall back upon the testimony of persons who had been present at the ceremony in one of the churches in this city. The parties who had actually signed the church register were forthcoming, but the register itself was wanting. We presume that by some unlucky circumstance the clerk had omitted to place his name in the copy which is of record in the office of the prothonotary; the church register had been destroyed by fire. The system, as at present administered, is cumbrous and imperfect, and will so remain until a general law for the whole Province is enacted, taking as a model the registration law of Great Britain, which is found to be efficient, and has done more than any other enactment to develop the present system of sanitary improvement.

On the results arising out of the returns of the registrar general for England, are based scales or tables which guide life assurance companies in the acceptance of risks at certain rates of premium. In fact the sanitary improvements of the old world take the form of a science, which is well worthy of careful study, and deserving of adoption in a country like Canada. We do not see that an alteration in our registration law should be attended with expense to the country, nor need it be oppressive on the people. It is customary, we believe, at all baptisms, to pay a registration fee of half a dollar. This fee goes to the clerk for his trouble of recording half a dozen words. The clergy of those churches where baptism is recognised as a sacrament, refuse all remuneration.

Between five and six thousand children are baptised in our city every year, and yet this does not give a correct estimate of the number born; but still, for the sake of argument, this would yield a large sum, which, if properly managed, would, with other registration fees, yield a revenue; and at the same time pay all the expense of an efficient and well-worked system.

These suggestions we offer with all due respect to our legislators, and trust that something may yet be done to remove the stigma of "the black north," so freely applied to us, and we fear most justly. There are many reforms needed, not alone in our registration system; but as this appears to be a matter which is the first step to a correct knowledge of the value of human life in our country, we are in a measure forced to bring it before the public with a hope that some good may result. It is

a subject that has engaged our serious attention for years, but circumstances have prevented its being alluded to before. All who give the matter a thought will admit the necessity for a change. We will again refer to this question in a future number of our journal.

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## BRATTLEBORO' LUNATIC ASYLUM.

Dr. Rockwell, the Superintendent, has forwarded us the twenty-eighth annual report of this asylum, and from it we learn that there were remaining at the commencement of the year, four hundred and forty-two patients. One hundred and twenty-eight have been admitted; one hundred and twelve have been discharged; and four hundred and fifty-eight now remain. Of those discharged, fifty-two have recovered.

We have invariably contended that an asylum should always be connected with a farm, and on this point the report thus speaks: "The benefit of the farm as a curative means is invaluable. Pleasant employment is the great moral means for the restoration of the patients, and no employment is so beneficial for the male patients, as that which requires exercise in the open air. By it the physical health is improved, the mind is diverted from its delusions, and the patients have the satisfaction of having done some good to themselves or others. The farm is managed with such success that its productions add greatly to the comfort and support of the Institution."

In a previous number of the *Canada Medical Journal* the attention of the Government was earnestly called to the absolute necessity which existed for the establishment of a lunatic asylum in the neighborhood of Montreal, and every month the necesssity is increasing. It is at least common sense to suppose that those suffering from mental derangement will be more likely to be benefited by being early brought under proper treatment. On this point Dr. Rockwell, the able Medical Superintendent, in his report says: "The importance of placing an insane friend in an asylum in the first stage of the disease, cannot be too often repeated and enforced. This subject is much better understood than formerly. Still many are disposed to keep them at home in the hope the patient may recover, without the trouble of removing them to an asylum. If the disease is mild, they too frequently pursue this course, until the time for restoration is past."

"It should be well understood, that chronic cases are far more difficult to recover, and those of long duration are generally incurable; while recent cases of insanity are as curable as those of other diseases of equal severity."

"All recent cases should be placed in an institution of this kind, before

those organic changes have taken place in the brain and nervous system, which render recovery hopeless."

The policy of our Government on putting off, what they must do ere a great while, is penny wise and pound foolish. There are many lunatics in various parts of Lower Canada, who, from want of treatment at the proper time, have become confirmed lunatics, and must eventually become a permanent burden on the Province. As an illustration of the necessity of another asylum we will mention a case occurring in our own practice. In the early part of the past summer a young married lady of this city was suddenly seized with hysterical mania. Owing to surroundings, and the conduct of injudicious friends, the case rapidly became worse till symptoms of acute mania set in. Application was immediately made to Government to have her admitted to the Beauport or other asylum, as her friends disliked sending her out of the Province, but the answer was; all full—when a vacancy occurred she would be admitted. Upon private enquiry we found that the applications unfulfilled previous to this one were so numerous, that months would likely elapse, ere a vacancy would occur for this patient. She was accordingly at our advice immediately removed to the Brattleboro' asylum—placed under the care of Dr. Rockwell—and in less than three months, she returned home perfectly well—and better in general health than she had been for years. Several weeks after this, an order for her admission into the asylum at St. Johns was received. Had the husband of this lady been poor and unable to pay for her maintainance in the asylum of a foreign state,—had he from force of circumstances been obliged, to wait till a vacancy occurred in our own asylum, there is no doubt that her chances of recovery would have been reduced a hundred fold. Our gaol constantly has seven or eight lunatics, often more, waiting for a vacancy to occur, and while confined in the prison, each day but renders recovery more hopeless. Can any thing speak louder than this as to the imperative necessity, which exists for the *immediate* erection of an asylum near this city, with all the modern improvements. In the mean time we commend the asylum at Brattleboro' to our brethren who may wish to find a suitable retreat for insane patients. The situation is lovely—the attendance all that can be desired—and the terms moderate in the extreme.

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## THE CARMICHAEL SCHOOL OF MEDICINE, DUBLIN.

Dr. Frazer, lecturer on Materia Medica, in this school, has forwarded us an account of the opening of their new building, on the 13th November last, when the introductory address or lecture was delivered by Dr. Robert McDonnell, in the presence of all the leading medical men

of Dublin, and a large concourse of sudents. The building, from the description given, seems to be admirably adapted to the wants of a first class medical school, the floor of the dissecting room being tiled—and for the purpose of cleaning can be flushed with water—no small advantage. Its cost was £6,000 sterling, and it is owing to the noble generosity of the man whose name the school bears, that it now occupies so magnificent a structure. Dr. Carmichael—a name familliar to every Dublin student was one of the original founders of this school, and on his death by accidental drowning, in 1849, at the age of 69 years, it was found, that he had bequeathed among many other legacies for the advancement of medical science, the sum of £10,000 sterling to this school, which was to be paid over on the decease of his wife. Of this, £8,000 was to be used in the erection of a building to be used by the school, and the interest on the remaining £2,000 was to be distributed in prizes to the students. His widow, however, desirous to see the wishes of her noble husband carried out while she yet lived, generously handed over the amount bequeathed, and we are glad to say she has been permitted to witness their completion. Dr. McDonnell's address gives many interesting facts concerning the life of Dr. Carmichael. One passage alone we quote, to show his generosity and nobleness of spirit towards the junior members of the profession. "A second address was presented to him by the Fellows and Licentiates of the College of Surgeons resident in Dublin at the termination of his third presidentship, to mark their appreciation of " his unceasing exertion in promoting the best interests of the profession, and of the kind encouragement which he on every occasion extended towards its junior members." In reply to this address he announced his intention to take an important step as regarded his private practice for the future, which was almost unexampled for its liberality. He said :—" Since the termination of my year of presidentship I have relinquished all practice, except in my own house or in consultation with a qualified practitioner. This determination has in a great measure arisen from a desire to show a good example to my cotemporaries, which I hope in due time they will follow for the benefit of their juniors."

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## APOLOGY.

We must apologise to the publishers who have so liberally forwarded to us copies of their new Medical publications, for the delay that has taken place in their review. The serious illness of Dr. Campbell threw the entire editorial charge upon the senior editor, who, in attending to private practice, Hospital and College duties, had but little time left at his disposal to give that attention to new works, which they merit.

### ASYLUM FOR THE INSANE.

The east wing of the new lunatic asylum at Kingston will be occupied this month by about one hundred insane patients. The west wing and centre of the building are finished, but await the interior fittings. The entire structure is built by convict labor, of stone quarried on the public land, and at one third or one half the expense the building would otherwise have cost. A similar institution must be erected at Montreal if the demand for asylum accommodation in Lower Canada meets with the attention it requires.

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The dried stems of the *Laminaria digitalia*, or sea-tangle, have been introduced and extensively used as a substitute for tents in surgery. They possess the property of being easily bent at any angle required by the operator. Secondly, they absorb moisture from tha secretions, and expand to five or six times their size when introduced; and furthermore assume their original straight positions. Sea-tangle has been recommended and used in various uterine affections, especially where there is any obliquity of the organ, and when the surgeon is desirous of dilating the os and cervix uteri.

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### CINCINNATI LANCET AND OBSERVER.

The *Canada Medical Journal* has been regularly sent to the above address; we note the missing numbers and have had them forwarded.

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## MEDICAL NEWS.

Two quack doctors in London were recently convicted of conspiracy against a captain of the 50th Regt. Seeing their advertisement he applied to them and received medicine, for which he appears to have paid roundly. Finding he derived no benefit he discontinued using their prescriptions, when they demanded £150, in default of which they would expose him. The Captain resisted, had them arrested, and they were sentenced each to two years' imprisonment at hard labor. — Mr. Price, F.R.C.S., Assistant-Surgeon to Kings College Hospital, London, died on the 13th November last. Next to Ferguson of London and Jones of Jersey, he did more to bring excision of the knee joint into the position it now occupies as a justifiable surgical operation than any other man living. Tuberculosis was the cause of his death. He was not forty years of age. — When Sir David Brewster delivered the introductory lecture at the opening of the Edinburgh University Session, the conduct of the students was disgraceful. They pelted peas at the Professor, and

even the venerable gray hairs of more than eighty years did not protect the lecturer. — A convalescent home for the patients of the Royal Infirmary, Glasgow, is about being established. — Dr. Brady, M.P. for Leitrim, Ireland, who died recently, has left a fortune of £1,000,000. — A hospital surgeon, writing to the 'Times,' relates the following case, which is only a sample of many others:—"A young officer, scarcely of age, was entrapped into giving bills to the amount of 4,000*l.* to an advertising quack. By my recommendation he went to a lawyer, who succeeded in reducing the sum to 200*l.* A second victim gave in hard cash 1,000*l.* for a single prescription; a third, after paying 900*l.* for the same determined to suspend the remaining 100*l.* until he had consulted me to ascertain his cure. The most incredible part of the whole is, that there was nothing at all the matter with either of these patients except the mental excitement which these miscreants produced, an excitement which I have known in many instances to end in a lunatic asylum. I have often tried to persuade the sufferers to face the charge, but without success, the dread of publicity being so unconquerable." — At the last sitting of the Academy of Sciences, Paris, a paper was received from Dr. Blanchet on three curious cases of constitutional lethargic slumber. One of them was that of a lady twenty-four years of age, who, having slept for forty days at the age of eighteen, and fifty days at the age of twenty during her honeymoon, at length had a fit of sleep which lasted nearly a whole year, from Easter Sunday, 1862, to March, 1863. During this long period a false front-tooth had to be taken out in order to introduce milk and broth into her mouth. This was her only food; she remained motionless, insensible, and all her muscles were in a state of contraction. Her pulse was low, her breathing scarcely perceptible; there were no evacuations, no leanness; her complexion was florid and healthy. The other cases were exactly similar.

A novel action was lately brought in Paris by a surgical mechanician, against two medical officers. The latter, Drs. Goupil and Bernurts, have published a book on the diseases of women, and therein stated that a peculiar pessary, invented by M. Grandcollot, did not, as far as they had seen, answer the purpose. The latter thereupon brought the action, laying the damages for the injury sustained at £1,000, requesting, besides, an apology in thirty newspapers, and also a rectification to be inserted in the above-mentioned work. He, however, lost his cause; the verdict was for the defendants, and the plaintiff was saddled with the costs.

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*Erratum.*—Page 278, line 22 from top, for "hot summer" read "hot hammer."

# MORTALITY OF THE CITY OF MONTREAL IN NOVEMBER, 1864.

*Compiled from the Cemetery Returns, by G. E. Fenwick, M.D.*

## Mount Royal Cemetery.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 1 | 1 | 2 | 2 | | | | | | | | | | | | | | | | | | 1 | | | | | 2 | |
| Senile Debility | 1 | 1 | 2 | | | | | | | | | 1 | | 1 | | | | | | 1 | 1 | | 1 | | | | 1 | 1 |
| Infantile Debility | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Small Pox | 2 | 1 | 3 | | | 1 | 1 | | 1 | | | | | | | | | | | | 2 | 1 | | | | | 2 | 1 |
| Measles | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scarlet Fever | 6 | 1 | 7 | | | | 7 | | | | | | | | | | | | | 3 | | 1 | 3 | | | | 6 | 1 |
| Fever | | 1 | 1 | | | | | | | 1 | | | | | | | | | | | | | 1 | | | | | 1 |
| Convulsions | | 1 | 1 | | | 1 | | | | | | | | | | | 1 | | | | | | | | | | 1 | |
| Inflammation of Brain | 2 | 2 | 4 | | | 1 | 3 | | | | | | | | | | | | | 1 | 1 | 1 | | 1 | | | 4 | |
| Apoplexy | 1 | 2 | 3 | | | | | | | 1 | 1 | | 1 | | | | | | | | 2 | | 1 | | | | | 3 |
| Paralysis | | 1 | 1 | | | | | | | | | 1 | | | | | | | | | | | | 1 | | | | 1 |
| Croup | 2 | 3 | 5 | | | 5 | | | | | | | | | | | | | | | 1 | | 2 | | | 2 | 5 | |
| Hooping Cough | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation of lungs | 3 | 1 | 4 | | | 1 | 1 | | | | 1 | 1 | | | | | | | | 1 | 1 | 2 | | | | | | 4 |
| Consumption | 2 | 2 | 4 | | | | | | 4 | | | | | | | | | | | | | 1 | 2 | | 1 | | | 4 |
| Disease of Heart | 1 | | 1 | | | | | | | 1 | | | | | | | | | | 1 | | | | | | | | 1 |
| Diphtheria | 1 | | 1 | | | 1 | | | | | | | | | | | | | | 1 | | | | | | | 1 | |
| Inflam. of Bowels | 1 | | 1 | | | | | | | | | 1 | | | | | | | | | | 1 | | | | | | 1 |
| Diarrhœa | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disease Liver | | 1 | 1 | | | | 1 | | | | | | | | | | | | | | 1 | | | | | | | 1 |
| Dropsy | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rheumatism | 1 | | 1 | | | | | | 1 | | | | | | | | | | | | | | 1 | | | | 1 | |
| Erysipelas | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cancer | | 1 | 1 | | | | | | | | | | 1 | | | | | 1 | | | | | | | | | | 1 |
| Accidental | 1 | | 1 | | | | | | | | 1 | | | | | | | | | | | | | | 1 | | | 1 |
| Total | 25 | 19 | 44 | 2 | 4 | 18 | 1 | 5 | 1 | 4 | 3 | 4 | 1 | 1 | | | 1 | 1 | 1 | 10 | 8 | 7 | 12 | | 1 | 3 | 23 | 21 |

## Roman Catholic Cemetery.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Sœurs Grises. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 9 | 1 | 10 | 10 | | | | | | | | | | | | | | | | 3 | 3 | 1 | | 1 | 1 | 1 | 10 | |
| Senile Debility | 3 | 6 | 9 | | | | | | | | | 1 | 5 | 3 | | | | | | 1 | | 2 | 1 | 1 | 1 | | 8 | 1 |
| Infant. Debility | 49 | 33 | 82 | | 82 | | | | | | | | | | | | 2 | | 1 | 4 | 5 | 2 | 7 | 9 | 5 | 44 | 80 | 2 |
| Small Pox | 5 | 7 | 12 | | 3 | 8 | 1 | | | | | | | | | | | | | 1 | 1 | 2 | 2 | 4 | 2 | | 11 | 1 |
| Measles | 5 | 6 | 11 | | 3 | 7 | | 1 | | | | | | | | | | | | | 5 | | | 2 | 4 | | 8 | 3 |
| Scarlet Fever | 3 | 2 | 5 | | | 4 | 1 | | | | | | | | | | | | | | | 3 | 2 | | | 1 | 3 | 2 |
| Fever | 9 | 2 | 11 | | 3 | 3 | 2 | 2 | 1 | | | | | | | | | | | | 3 | 2 | | 3 | | 2 | 8 | 3 |
| Inflam. Brain | 1 | 2 | 3 | | 1 | 2 | | | | | | | | | | | | | | | 1 | | | 1 | | | 1 | 2 |
| Paralysis | 1 | 1 | 2 | | | | | | | 1 | | 1 | | | | | | | | 1 | 1 | | | | | | 2 | |
| Hooping Cough | | 1 | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| Croup | 2 | 5 | 7 | | | 7 | | | | | | | | | | | | | | 1 | | 1 | 1 | | 2 | | 6 | 1 |
| Inflam. Lungs | 2 | 3 | 5 | | | 2 | | | 2 | | 1 | | | | | | | | | 1 | | | 1 | 3 | | | 3 | 2 |
| Consumption | 9 | 15 | 24 | | | | 4 | 3 | 8 | 6 | 2 | 1 | | | | | | | | 3 | 7 | 2 | 6 | 4 | 1 | 1 | 14 | 10 |
| Disease Heart | 1 | 2 | 3 | | | | | 1 | | 1 | | 1 | | | | | | | | | 1 | 1 | 1 | 1 | | | 1 | 2 |
| Asthma | | 2 | 2 | | | | | | | | 1 | 1 | | | | | | | | | 1 | 1 | | | | | 1 | 1 |
| Dentition | 10 | 10 | 20 | | 20 | | | | | | | | | | | | 1 | | | 1 | 1 | | 5 | 5 | 2 | 5 | 16 | 4 |
| Inflam. Bowels | 1 | 4 | 5 | | | 1 | | | 1 | | | 2 | 1 | | | | | | | 2 | 1 | | | 1 | | 1 | 1 | 4 |
| Disease Liver | 1 | | 1 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | 1 | |
| Dropsy | 2 | | 2 | | | | | | 1 | | | 1 | | | | | | | | | | 2 | | | | | | 2 |
| Rheumatism | 1 | | 1 | | | | | | 1 | | | 1 | | | | | | | | | 1 | | | | | | 1 | |
| Erysipelas | | 1 | 1 | | | | | | 1 | | | | | | | | | | 1 | | | | | | | | | 1 |
| Abscess | 1 | 1 | 2 | | 1 | | | 1 | | | | | | | | | | | | 1 | | | | | | 1 | 2 | |
| Cancer | | 1 | 1 | | | | | | | | | 1 | | | | | | | | | | 1 | | | | | 1 | |
| Childbirth | | 1 | 1 | | | | | | 1 | | | | | | | | | | | | | | | | | | | 1 |
| Accidental | 1 | 1 | 2 | | | 1 | 1 | | | | | | | | | | | | | 1 | 1 | | | | | | 2 | |
| Total | 116 | 107 | 223 | 10 | 113 | 36 | 9 | 8 | 13 | 9 | 5 | 10 | 7 | 3 | | | 3 | | 2 | 20 | 27 | 20 | 30 | 36 | 18 | 45 | 181 | 42 |

## MORTALITY OF THE CITY OF MONTREAL IN DECEMBER, 1864.

*Compiled from the Cemetery Returns, by G. E. Fenwick, M.D.*

### Mount Royal Cemetery.

| Disease. | Male. | Female. | Total. | Still-born. | Under 2 years. | From 2 to 10. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50. | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Not of Montreal. | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 3 | 5 | 8 | 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 3 | .. | 1 | .. | .. | 8 | .. |
| Senile Debility | 3 | 2 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 2 | .. | .. | .. | .. | 1 | 1 | .. | 2 | .. | .. | .. | 1 | 1 | 4 |
| Infantile Debility | 3 | 1 | 4 | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 1 | .. | .. | .. | 1 | 4 | .. |
| Small Pox | 2 | 2 | 4 | .. | 2 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | .. | 1 | 3 | 1 |
| Measles | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. |
| Scarlet Fever | 2 | 1 | 3 | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | .. | 3 | .. |
| Fever | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. |
| Inflammation of Brain | 4 | 1 | 5 | .. | 1 | 3 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. | 1 | .. | .. | 2 | 3 |
| Convulsions | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| Apoplexy | .. | 3 | 3 | .. | .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | 3 | .. |
| Paralysis | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 1 | 1 |
| Disease spine | .. | 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. |
| Croup | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Hooping Cough | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Inflammation of Lungs | 1 | 2 | 3 | .. | 2 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | 2 | 1 |
| Consumption | 3 | 6 | 9 | .. | .. | .. | .. | 2 | 4 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 2 | 1 | 1 | .. | .. | 2 | 6 | 3 |
| Disease of Heart | 1 | 2 | 3 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | 2 |
| Diphtheria | .. | 1 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. |
| Inflam. of Bowels | 1 | 2 | 3 | .. | .. | 1 | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | .. | .. | 2 | 1 |
| Disease of Liver | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. |
| Dropsy | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Rheumatism | 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 |
| Cancer | 1 | 1 | 2 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | 1 |
| Child-birth | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. |
| Accidental | 2 | .. | 2 | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 |
| Total | 30 | 34 | 64 | 8 | 13 | 8 | 5 | 8 | 7 | 7 | 2 | 1 | 3 | 2 | .. | .. | 2 | .. | 4 | 15 | 13 | 12 | 5 | 3 | 2 | 8 | 43 | 21 |

### Roman Catholic Cemetery.

| Disease. | Male. | Female. | Total. | Still-born | Under 2 years. | 2 to 10 years. | From 10 to 20. | From 20 to 30. | From 30 to 40. | From 40 to 50 | From 50 to 60. | From 60 to 70. | From 70 to 80. | From 80 to 90. | From 90 to 100. | Over 100 years. | Centre Ward. | West Ward. | East Ward. | St. Antoine. | St. Ann. | St. Lawrence. | St. Louis. | St. James. | St. Mary. | Sœurs Grises. | Not of Montreal | Native Born. | Foreign. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Still-born | 6 | 5 | 11 | 11 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 2 | 1 | 2 | 2 | .. | 1 | 11 | .. |
| Senile Debility | 3 | 7 | 10 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 5 | 1 | 1 | .. | .. | .. | 3 | 3 | 1 | 3 | 1 | .. | .. | .. | 9 | 1 |
| Infant. Debility | 47 | 38 | 85 | .. | 85 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 3 | 1 | 4 | 14 | 10 | 36 | 9 | 76 | 9 |
| Small Pox | 10 | 8 | 18 | .. | .. | 5 | 12 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 2 | 4 | 1 | 2 | 1 | .. | 5 | 12 | 6 |
| Measles | 12 | 10 | 22 | .. | 10 | 11 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 4 | 2 | 4 | 5 | 2 | .. | 2 | 19 | 3 |
| Scarlet Fever | 2 | 9 | 11 | .. | .. | 5 | 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 2 | 2 | 4 | 1 | .. | 1 | 9 | 2 |
| Fever | 2 | 5 | 7 | .. | .. | 1 | 1 | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 2 | .. | .. | 2 | 5 | 2 |
| Inflam. Brain | 2 | 1 | 3 | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | .. | .. | 2 | 1 |
| Apoplexy | 1 | 2 | 3 | .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | 3 | .. |
| Paralysis | 1 | 4 | 5 | .. | .. | .. | .. | .. | 2 | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 2 | .. | .. | 3 | 2 |
| Croup | 6 | 4 | 10 | .. | 6 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 1 | 2 | 1 | .. | 2 | 7 | 3 |
| Inflamm. Lungs | 1 | 2 | 3 | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | 2 | 1 |
| Consumption | 9 | 17 | 26 | .. | .. | .. | 5 | 8 | 5 | 7 | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | 5 | 4 | 6 | 4 | 3 | 1 | .. | 1 | 20 | 6 |
| Disease Heart | 3 | 2 | 5 | .. | .. | .. | 1 | .. | 2 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | .. | 1 | .. | .. | 4 | 1 |
| Diphtheria | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. |
| Inflam. Bowels | 4 | 1 | 5 | .. | .. | 1 | .. | 1 | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | 1 | .. | .. | 1 | 5 | .. |
| Dentition | 3 | 5 | 8 | .. | 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | .. | .. | 1 | 3 | .. | .. | 6 | 2 |
| Disease Liver | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Dropsy | 1 | 5 | 6 | .. | .. | .. | .. | 1 | .. | 1 | 1 | 2 | 1 | .. | .. | .. | 1 | .. | .. | .. | 1 | 2 | .. | 2 | .. | .. | .. | 3 | 3 |
| Rheumatism | 2 | .. | 2 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | 2 | .. |
| Erysipelas | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. |
| Aneurism | 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cancer | 1 | 3 | 4 | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | 1 | .. | .. | .. | .. | 3 | 1 |
| Childbirth | .. | 4 | 4 | .. | .. | .. | .. | 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | 1 | 2 | 2 |
| Accidental | 3 | .. | 3 | .. | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | .. | 2 | 1 |
| Total | 122 | 134 | 256 | 11 | 121 | 39 | 12 | 17 | 16 | 13 | 8 | 5 | 6 | 6 | 1 | 1 | 4 | .. | 3 | 24 | 32 | 35 | 25 | 46 | 26 | 36 | 25 | 208 | 48 |

# ABSTRACT OF METEOROLOGICAL OBSERVATIONS,

*Taken at the Montreal Observatory, Latitude* 45° 31′ *N. Longitude, 4h.* 54*m.* 11*s. W. of Greenwich. Height above the level of the Sea* 182 *feet. For the month of November* 1864.

BY CHARLES SMALLWOOD, M.D., LL.D., D.C.L.

| Day of Month. | Reading of the Barometer, corrected, and reduced to 32° F. | | | Reading of Thermometer. | | | Mean Tension of Vapor. | Mean Humidity of the Atmosphere. | General direction of Wind. | Horizontal movement in 24 hours in miles. | Mean extent of Clouds in 10ths. | Depth of Rain in inches. | Depth of Snow in inches. | Ozone in 10ths. | Weather, &c. | Remarks for the Month. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Highest | Lowest. | Mean. | Max. | Min. | Mean | | | | | | | | | | |
| | Inches. | Inches. | Inches. | | | | | | | | | | | | | |
| 1 | 30.005 | 29.609 | 29.867 | 44.8 | 25.5 | 36.0 | .205 | .881 | W | 96.81 | 4.0 | .... | .... | 1.6 | | Barometer ... Highest, the 25th day, 30.300 inches. |
| 2 | .051 | 30.018 | 30.038 | 38.0 | 26.0 | 32.5 | .178 | .879 | W | 125.11 | 5.3 | .... | .... | 1.0 | | Barometer ... Lowest, the 4th day, 28.668 " |
| 3 | 29.890 | 29.834 | 29.856 | 50.1 | 21.2 | 36.3 | .217 | .871 | W | 69.91 | 0.6 | .... | .... | 1.6 | | Barometer ... Monthly Mean, 29.720. " |
| 4 | .412 | 28.668 | .383 | 39.2 | 23.9 | 35.2 | .198 | .901 | N E | 153.14 | 10.0 | 1.260 | .... | 3.0 | Rain. | Barometer ... Monthly Range, 1.632. " |
| 5 | .611 | 29.114 | .019 | 59.4 | 30.4 | 32.6 | .184 | .903 | W | 87.60 | 9.6 | . .. | .... | 1.6 | | Thermometer Highest, the 7th day, 58°.4. |
| 6 | .914 | .841 | .837 | 51.3 | 31.1 | 41.1 | .247 | .885 | W | 184.24 | 0.0 | .... | .... | 2.3 | | Thermometer Lowest, the 24th day, 9°.8. |
| 7 | .948 | .714 | .853 | 58.4 | 39.4 | 48.0 | .311 | .889 | S W | 99.76 | 4.6 | Inapp | .... | 2.6 | Rain. | Thermometer Monthly Mean, 38°.11. |
| 8 | 30.004 | .863 | .948 | 51.2 | 34.7 | 46.2 | .292 | .887 | w bys | 97.47 | 7.6 | Inapp | .... | 2.6 | Rain. | Thermometer Monthly Range, 48°.6. |
| 9 | 29.594 | .347 | .480 | 56.4 | 48.4 | 59.9 | .472 | .908 | w bys | 86.67 | 10.0 | 0.902 | .... | 3.0 | Rain. | Greatest intensity of the Sun's rays, 73°1. |
| 10 | .279 | .080 | .183 | 50.2 | 50.1 | 50.9 | .364 | .889 | w bys | 217.44 | 8.0 | 0.210 | .... | 2.6 | Rain. | Lowest point of Terrestrial Radiation, 7°.4. |
| 11 | .449 | .296 | .362 | 43.0 | 35.7 | 39.9 | .224 | .858 | W | 146.89 | 6 6 | .... | .... | 2.0 | | Mean of Humidity, 8.899. |
| 12 | .547 | .501 | .520 | 43.4 | 29.7 | 38.9 | .224 | .895 | W | 179.70 | 3.3 | .... | .... | 1.3 | | Rain fell on 13 days, amounting to 2.360 inches. |
| 13 | .674 | .614 | .631 | 40.9 | 29.4 | 35.3 | .300 | .899 | N N E | 179.40 | 6.6 | .... | .... | 1.3 | | Snow fell on 3 days, amounting to 4 inches. |
| 14 | .994 | .880 | .931 | 51.8 | 23.0 | 36.5 | .213 | .890 | N W | 211.22 | 2.6 | .... | .... | 2.6 | | Most prevalent wind, W. |
| 15 | .917 | .771 | .581 | 33.8 | 28 1 | 31.7 | .177 | .904 | N E | 110.00 | 10.0 | .... | .... | 3.0 | | Least prevalent wind, S. E. |
| 16 | 30.255 | 30.022 | 30.154 | 33.8 | 20.4 | 28.9 | .130 | .869 | W | 87.69 | 7.6 | .... | 3.10 | 3.0 | Snow. | Most windy day, the 10th day, mean miles per hour, 10.31. |
| 17 | .105 | 29.764 | 29.949 | 36.3 | 22.0 | 32.1 | .179 | .888 | S E | 46.27 | 9.6 | .... | .... | 2.3 | | |
| 18 | 29.820 | .764 | .795 | 50.3 | 32.0 | 39.6 | .236 | .892 | W | 152.72 | 2.6 | 0.300 | .... | 3.0 | Rain. | Least windy day, the 30th day, mean miles per hour, 0.56. |
| 19 | .986 | .916 | .948 | 40.2 | 25.1 | 33.9 | .191 | .872 | W | 179.42 | 6.0 | .... | .... | 2.6 | | |
| 20 | .904 | .709 | .828 | 55.0 | 34.7 | 43.9 | .269 | .875 | W | 79.47 | 3.3 | .... | .... | 2.3 | | Aurora Borealis visible on 2 nights. |
| 21 | .585 | .377 | .486 | 46.1 | 33.1 | 40.4 | .244 | .912 | s byw | 124.71 | 10.0 | 0.182 | .... | 3.0 | Rain. | Lunar Corona, visible on 1 night. |
| 22 | .411 | .090 | .247 | 43.2 | 31.2 | 36.4 | .222 | .924 | wbyN | 57.80 | 10.0 | 0.288 | .... | 3.6 | Rain. | |
| 23 | .998 | .447 | .747 | 38.1 | 29.4 | 31.7 | .180 | .890 | W | 44.71 | 5.3 | .... | 0.90 | 2.3 | Snow, | |
| 24 | 30.267 | 30.228 | 30.248 | 31.4 | 9.8 | 23.8 | .139 | .865 | W S W | 71.46 | 7.6 | .... | .... | 2.0 | | |
| 25 | .300 | .264 | .285 | 35.5 | 30.4 | 33.2 | .180 | .871 | wbys | 94.72 | 10.0 | .... | Inapp | 3.0 | Snow. | |
| 26 | .097 | 29.946 | .018 | 41.8 | 31.4 | 35.7 | .302 | .867 | S E | 24.21 | 8.0 | Inapp | .... | 3.6 | Rain. | |
| 27 | 29.863 | .800 | 29.835 | 36.0 | 33.4 | 34.8 | .189 | .881 | N E | 111.42 | 10.0 | 0.246 | .... | 4.0 | Rain. | |
| 28 | .900 | .504 | .706 | 42.2 | 31.6 | 37.6 | .221 | .914 | S E | 22.19 | 10.0 | Inapp | .... | 2.6 | Rain. | |
| 29 | .577 | .397 | .408 | 46.1 | 41.1 | 44.1 | .281 | .925 | W S W | 17.70 | 10.0 | 0.543 | .... | 3.3 | Rain. | |
| 30 | .442 | .414 | .425 | 44.0 | 38.4 | 42.1 | .255 | .911 | N E | 13.49 | 10.0 | 0.500 | .... | 3 3 | Rain. | |

# ABSTRACT OF METEOROLOGICAL OBSERVATIONS,

*Taken at the Montreal Observatory, Latitude* 45° 31′ *N. Longitude,* 4*h* 54*m.* 11*s. W. of Greenwich. Height above the level of the Sea* 182 *feet. For the month of December* 1864.

BY CHARLES SMALLWOOD, M. D., LL.D., D.C.L.

| Day of Month. | Reading of the Barometer, corrected, and reduced to 32° F. | | | Reading of Thermometer. | | | Mean Tension of Vapor. | Mean Humidity of the Atmosphere. | General direction of Wind. | Horizontal movement in 24 hours in miles. | Mean extent of Clouds in 10ths. | Depth of Rain in Inches. | Depth of Snow in Inches. | Ozone in 10ths. | Weather, &c. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Highest | Lowest. | Mean. | Max. | Min. | Mean | | | | | | | | | |
| | Inches. | Inches. | Inches. | | | | | | | | | | | | |
| 1 | 30.000 | 29.562 | 29.812 | 49.7 | 34.7 | 41.1 | .245 | 882 | W S W | 104.40 | 6.0 | 0.060 | .... | 2.0 | Rain. |
| 2 | .134 | .972 | 30.075 | 37.2 | 24.0 | 31.8 | .174 | .870 | N E | 84.26 | 6.6 | .... | 0.70 | 2.6 | Rain. |
| 3 | 29.489 | .304 | 29.385 | 44.5 | 35.2 | 40.5 | .257 | .900 | N E | 94.70 | 10.0 | 0.412 | .... | 3.0 | Rain. |
| 4 | .607 | .451 | .506 | 42.8 | 29.7 | 34.6 | .195 | .901 | W | 114.90 | 2.0 | .... | .... | 2.3 | |
| 5 | 800 | .617 | .753 | 31.4 | 19.0 | 27 3 | .152 | .899 | W | 232.40 | 7.6 | Inapp | .... | 3.0 | Rain. |
| 6 | .774 | .495 | .593 | 40.2 | 30.4 | 35.8 | .205 | .899 | N E | 47.70 | 10.0 | 0.441 | .... | 3.0 | Rain. |
| 7 | .582 | 28.948 | .247 | 38.4 | 35.1 | 37.5 | .308 | .885 | W | 47.10 | 10 0 | 0.211 | .... | 2.6 | Rain. |
| 8 | 29.874 | 29.342 | 29.579 | 32.0 | 18.9 | 25.3 | .141 | .889 | W | 272.40 | 6.0 | .... | Inapp | 3.3 | Snow. |
| 9 | 30.492 | 30.262 | 30.410 | 29.5 | 8.2 | 18.6 | .106 | .863 | W | 371.14 | 0.0 | .... | .... | 2 3 | Lunar Halo. |
| 10 | .231 | 29.900 | .072 | 22.4 | 18.0 | 31.8 | .109 | .848 | N E | 51 74 | 10.0 | .... | 0.64 | 3.0 | Snow. |
| 11 | 29.747 | .279 | 29.524 | 26.0 | 18.4 | 23.0 | .129 | .894 | N E | 114.14 | 8 6 | .... | 1.30 | 3.3 | Snow. |
| 12 | .752 | 28.964 | .362 | 22.4 | 2.5 | 11.9 | .083 | 877 | W | 111.14 | 9.3 | .... | 5.84 | 3.0 | Snow. |
| 13 | 30.142 | 29 799 | 30.011 | 9.0 | -9.0 | 0.3 | .045 | .876 | Wby N | 142.71 | 6 3 | .... | Inapp | 3.0 | Snow. |
| 14 | 29.800 | .364 | 29.670 | 20.5 | 10.6 | 13.9 | .089 | .864 | N E | 94.10 | 8.6 | .... | 3.50 | 3.0 | Snow. |
| 15 | 30.101 | 30.024 | 30.061 | 17.0 | -0.5 | 7.4 | .065 | .877 | W | 97.64 | 0.0 | .... | .... | 2.6 | |
| 16 | 29.994 | 29.987 | 29.990 | 22.1 | 9.5 | 17.1 | .096 | .895 | N E | 57.89 | 10.0 | .... | .... | 2.0 | |
| 17 | .894 | .797 | .851 | 32.0 | 18.0 | 25.7 | .144 | .896 | N E | 47.70 | 6.6 | .... | .... | 2.6 | |
| 18 | 30.311 | 30.241 | 30.264 | 22.2 | 13.6 | 17.6 | 1.1 | .862 | W | 104.71 | 0.0 | .... | Inapp | 3.0 | Snow. |
| 19 | 19.401 | 19.317 | 29.349 | 20.2 | 14.7 | 18.4 | .103 | .844 | N E | 74.44 | 3.3 | .... | 3.14 | 3.0 | Snow. |
| 20 | .797 | .602 | .711 | 16.8 | 8.1 | 12.5 | .076 | .853 | W | 87.64 | 0.0 | .... | .... | 2.0 | |
| 21 | .416 | .249 | .311 | 13.4 | 9.8 | 11.6 | .083 | .885 | N E | 59.74 | 10.0 | .... | 4.75 | 3.3 | Snow. |
| 22 | 29.304 | 29.304 | 29.511 | 16.0 | -6.1 | 5.7 | .058 | .874 | N E | 117.11 | 4 0 | .... | 1.20 | 3.0 | Snow. |
| 23 | .847 | .737 | .795 | -2.5 | -14.9 | -7.2 | .031 | .862 | Wby N | 146.61 | 10.0 | .... | .... | 1.1 | |
| 24 | .742 | .644 | .699 | 10.0 | -4.6 | 4.02 | .060 | .911 | N E | 207.40 | 10.0 | .... | Inapp | 2.0 | Snow. |
| 25 | .861 | .679 | .795 | 36.6 | 24.0 | 31.0 | .169 | .885 | W | 133.10 | 8.0 | .... | .... | 2.0 | |
| 26 | .671 | .637 | .650 | 40.2 | 33.0 | 34.4 | .197 | .904 | W | 71.11 | 6.6 | .... | Inapp | 2.0 | Snow. |
| 27 | .490 | .379 | .427 | 40.0 | 31.0 | 36.0 | .192 | .874 | N E | 79.10 | 10.0 | Inapp | .... | 2.6 | Rain. |
| 28 | .411 | .407 | .409 | 38.4 | 32.6 | 35.7 | .199 | .887 | S W | 49.90 | 8.6 | 0.197 | .... | 3.0 | Rain. |
| 29 | 29.270 | 29.199 | 29.224 | 32.0 | 31.6 | 31.8 | .184 | .935 | W | 24.70 | 10.0 | .... | 2.50 | 3.0 | Snow. |
| 30 | .400 | .279 | .350 | 26.4 | 15.1 | 22.0 | .126 | .899 | W | 207.41 | 6.6 | .... | Inapp | 2.0 | Snow. |
| 31 | .817 | .602 | .737 | 20.2 | 3.5 | 13.9 | .117 | .867 | W | 74 60 | 8.6 | .... | .... | 3.0 | |

Remarks for the Month.

Barometer .. Highest the 1st day, 30.311 inches.
Lowest the 12th day, 28.964 "
Monthly Mean, 29.934 "
Monthly Range, 1.357 "

Thermometer Highest the 1st day, 49°7.
Lowest the 23rd day, -14°9.
Monthly Mean, 22°.28.
Monthly Range, 64°.6.

Greatest intensity of the Sun's rays, 69.7.
Lowest point of Terrestrial radiation, -16°.1.
Mean of Humidity, °.880.
Rain fell on 7 days, amounting to 1.301 inches.
Snow fell on 15 days, amounting to 22.97 inches.
Most prevalent wind, W.
Least prevalent wind, S. W.
Most windy day the 9th day, mean miles per hour, 15.47.
Least windy day, the 29th day, mean miles per hour, 1.02.
Aurora Borealis visible on 1 night.
Lunar Halo visible on 1 night.

# CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Remarks on the late case of Accidental Poisoning at Quebec.* By A. HALL, M.D., Professor of Midwifery, McGill University; Honorary Fellow of the Obstetrical Society of London, &c., &c.

Accidental poisoning by apothecaries is fortunately a matter of rare occurrence in Canada, and this the result generally of the care with which their establishments are usually conducted. To this fact, so far as the city of Montreal is concerned, I cheerfully bear witness; but to suppose apothecaries generally immaculate, as regards their incapacity of perpetrating a mistake, is to suppose an absurdity. *Humanum est errare.* The frailty of human nature is proverbial; and when an unintentional error has been committed, Christian charity should throw its veil over the transaction. The lamentable accident which occurred at the close of the last month in Quebec, and the difficulty which apparently existed in determining the nature of the poison, which was undoubtedly taken, have suggested the following observations which are here given, not by way of fault-finding, but for the simple purpose of elucidating the truth, if possible. It is admitted that obscurity hangs over the whole case, but I do not believe it altogether unsusceptible of a proper analysis.

On the 28th December, three young gentlemen, Messrs Murney, Rankin, and Scott, left Russell's Hotel, at Quebec, to pay a morning visit, after having spent the preceding evening at a social party. It was suggested to call at Sturton's (Apothecaries) shop to get a tonic. This order—one apparently well understood as to its composition and intended effect—was prepared by young Mr. Sturton, the apothecary in charge, and should have contained tincture of cardamoms, tincture of cinchona, with tincture of ginger, and a little aromatic spirits of ammonia and syrup. Messrs. Rankin and Scott took the draught as presented to them;

that of Mr. Murney had a seidlitz-powder incorporated. In the course of half an hour they all *felt peculiar sensations at the ends of their fingers.* The parties shortly separated, Mr. Murney going to the office of the Board of Works, where he soon afterwards "fell down." He shortly recovered and walked to Russell's Hotel, where the additional symptoms developed themselves, ending in his death.

At the inquest, it was stated in evidence by Drs. Marsden and Russell that the death was occasioned by an admixture of the tincture of digitalis with the given draught. It is possible that in the following remarks I may be mistaken, but I apprehend that I will be able to shew that the cause of death was not digitalis, but aconite, and this from the recognized *influence* of those two potential agents upon the system.

We have, in the first place, to inquire into the symptoms as elicited by the three cases, and especially by the case of Mr. Murney.

In the course of half an hour Mr. M. felt "extraordinary sensations at the ends of the fingers." At the office of the Board of Works "he fell down" (a convulsion (?)—"a rising in his stomach" (quere nausea), and "great pain." Mr. Russell states that he complained of numbness of the limbs and difficulty in respiration, and that he could not lie down. He complained of a prickly sensation, as if he had pins sticking in his face."

Dr. Marsden deposed, that after his treatment for extreme nervous depression, and the repeated declaration of Mr. Murney that "he was dying," he was attacked by three consecutive fits of a convulsive character, after the last of which he died.

The post mortem examination revealed "a remarkably fluid state of the blood, which was of a dark color; with the exception of slight enlargement of the heart, there was no other morbid appearance worthy of notice. The stomach was intensely inflamed. The throat and gullet exhibited no traces of morbid action excepting at the junction of the stomach, not even what I have repeatedly seen in the throat and gullet of persons addicted to the use of ardent spirits. There can be no doubt that death was occasioned by a vegetable poison of the narcotico-acid class, and *no analysis could enlighten the jury.*"

Such then were the symptoms and post mortem appearances as observed in the case of the deceased Mr. Murney, and as recorded in the proceedings of inquest as copied and reported in the *Montreal Herald* of dates Jan. 4th, 6th, and 7th.

Let us now examine the symptoms as they declared themselves in the cases of Mr. Rankin and Mr. Scott. Mr. Rankin states that in "about half an hour he began to feel extraordinary sensations at the ends of

his fingers." Mr. Scott said that he felt the same, and I think that Mr. Murney said the same. "I was very ill, feeling a numbness at the ends of my fingers, and on the scalp of my head, and the same sensation in my feet—I also felt very sick at my stomach, and I vomited the potion I had got at Mr. Sturton's." "The feeling was of a death-like nature, but without acute pain." "I became insensible; I fainted"—"Remained in a stupid condition until about 6 o'clock." "Inclination to sleep" after leaving Mr. Murney's room.

Mr. Scott's evidence as regards symptoms was of like character.

After this detail of the most prominent symptoms as gleaned from the report of the case, I proceed to examine the symptoms characteristic of poisoning by digitalis and aconite, Drs. Marsden and Russell having declared themselves in favor of the idea, that the tincture of digitalis had been unfortunately added to the mixture in place of the tincture of cardamons, or one of the other tinctures usually employed in such beverages.

The grand phenomena of poisoning by foxglove (digitalis) according to Pereira, when given in fatal doses, are the following: "vomiting, purging, and griping pain in the bowels; slow, feeble and irregular pulse; great faintness, and cold sweats; discolored vision at first, giddiness, extreme debility; afterwards insensibility and convulsions with dilated insensible pupils"* Again, in accordance with another author, digitalis in poisonous doses produces the following principal phenomena: "cramps in the limbs, convulsions, lethargy, dilated pupils, swelling of the tongue and lips, discharge of viscid saliva, vomiting, suppression of urine, a slow, infrequent, irregular, and intermitting pulse; and finally death by coma."†

Such then are the prominent symptoms of poisoning by digitalis. Let us now see what the same eminent authorities declare to be the chief characteristics of poisoning by aconite.

"When the root or its tincture is swallowed, the most marked symptoms are numbness and tingling of the parts about the mouth and throat, and of the extremities, vomiting, contracted pupil, and failure of the circulation. The heart appears to be weakened or paralyzed, and a state approaching to asphyxia is produced. Convulsion or spasm is not constantly present, and when it does take place is probably a secondary effect arising from the incipient asphyxia. In neither of the cases which I have above detailed did stupor occur. Yet in some recorded cases it did happen."

* Pereira's Materia Medica, vol. 2, fol. 461.

† Stillé's Therapeutics, vol. 2, fol. 330.

Such are again Pereira's remarks, and let us now see furthermore what Stillé says, and in this matter he quotes from Fleming's thesis in which the symptoms are detailed in accordance with four different degrees of doses*—among the most prominent of which are nausea, numbness, tingling, feeling of distention of the lips and tongue, tingling at the tips of the fingers and lips, muscular weakness with indisposition for exertion either mental or corporeal, diminution of force and frequency in both pulse and respiration, lethargy; the patient feeling as if dying from loss of blood; countenance becomes pale and sunken and the prostration increases, "consciousness usually remains." But in extreme cases the patient becomes blind, deaf, and speechless; muscular tremors or convulsions supervene, and death takes place by syncope.

Dr. Geoghegan † published an interesting case of poisoning by the root of the aconite, in the Dublin Journal of the Medical Sciences, in which the unfortunate man, who had partaken of *greens* in which the root of aconite was intentionally mixed by his wife, complained of a "sensation of swelling of the face," a general feeling of numbness and cramping of the skin, followed by "restlessness, dimness of vision, and stupor amounting to insensibility." About an hour after the meal he was found by a neighbor speechless, frothing at the nose and mouth, hands and jaws clenched, appearing occasionally as if dead (syncope) and again reviving,"—"vomiting" came on with "slight purging."

I do not think it necessary to multiply authorities to demonstrate that the symptoms of poisoning by digitalis and aconite are quite specific in each case, and so characteristic as to render it a matter of surprise that the two drugs should be confounded. In poisoning by digitalis, the peculiar symptoms of numbness of the extremities, or pricking, or tingling, are entirely absent, as well are those of the same peculiar character in the face, head, and throat. And when these facts are coupled with the declaration of Mr. Sturton, jun., himself,‡ as well as that of Mr. Sturton, sen., in regard to the height of the tincture of digitalis § in the bottle which contained it, I think there can be little doubt but that aconite, not digitalis, was the cause of death.

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* Stillé's Therapeutics, vol. 2, p. 355.

† Dublin Journal of Medical Science, vol. 19, p. 404.

‡ "Young Sturton did not think digitalis was the cause of his error; he thought it might be aconite." *Evidence of Dr. Marsden.* It appears there was a small bottle of tr. aconite on the counter, but whether Fleming's tincture or not, does not appear. In all probability it was not Fleming's tincture, as the symptoms would have developed themselves sooner.

§ "I am quite satisfied that no tincture has gone out of that bottle for the last three months, and this opinion is deduced from the appearance of the film at the margin of the liquid in the bottle."—*Evidence of S. Sturton.*

There is one point, however, in the evidence given at the inquest, as detailed in the report of it in the *Montreal Herald* which demands a passing remark, and which strikes me as most singular, if the report be accurate. Mr. Sturton, sen., stated, "Digitalis is often given in doses of half an ounce, and one ounce, to remove the consequences of continued intoxication." I presume that the witness here alluded to the comparatively recent employment of that medicine in delirium tremens, as originally suggested by Mr. Jones, Surgeon of the Jersey General Hospital. It is impossible that Dr. Marsden could have been ignorant of that fact, or that Dr. Russell could have been also who sustained the opinion of Dr. Marsden. The report says that "Dr. Marsden expressed dissent from the opinion given by Mr. Sturton respecting the properties of digitalis. It was, he said, a most deadly poison." And in reply to the question, "Have you read in medical authors of doses of one ounce of tincture of digitalis being given?" Dr. Russell is reported to have answered, "I have read and heard of enormous doses of poisonous drugs being recklessly administered, and that such treatment has produced the death of the patients in some instances. A judicial investigation has condemned such practice; and I hope they will always do so, for the practice is unjustifiable."

Against this sweeping denunciation I thoroughly demur. It is true that two or three instances of decease have succeeded the exhibition of large doses of digitalis in delirium tremens cases, but it is very questionable, indeed, if the cause alleged did not savor much of the *post hoc ergo propter hoc* style of reasoning. Were such reasoning of value, we should have to discard the greater part of our most valuable remedial agents. How many deaths have occurred, traceable distinctly to the employment of chloroform; and yet is there an agent more commonly employed or more generally esteemed? I have myself repeatedly administered the tincture of digitalis in doses of four and six drachms in cases of delirium tremens, and have as frequently witnessed its tranquillizing influence after opium had most signally failed.

One of the most remarkable answers during the whole enquiry, is that reported as having been given by Dr. Russell to the question by a juror: "Have you a knowledge of any other drug likely to produce such symptoms as those experienced? *Ans.* The narcotico-acid poisons often produce symptoms at first sight very much alike. They are generally vegetable. The two principal are aconite and hyoscyamus. *Strychnine is a narcotico-acid poison*, but not in such common use as digitalis, aconite and hyoscyamus."

I am persuaded that it will be news to all writers on the materia

medica *in future* to have to class strychnine among the narcotico-acrid poisons. It is a most powerful irritant poison or cerebro-spinant, and it does not possess one atom of narcotic power.

I think, in conclusion, it will be conceded that the train of symptoms, as revealed in the three cases, points to aconite as the poison really ingested. I think it unnecessary to recapitulate all the negative signs (*quoad* this case,) by which poisoning by digitalis would, of necessity, have been characterized.

Montreal, Jan. 28th, 1865.

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*Case of Artificial Anus, the result of a gun-shot wound.* By HERBERT S. TEW, M.D., Assistant House Surgeon and Apothecary to the Montreal General Hospital.

Duncan Cameron, aged 34 years, of medium height, a muscular well proportioned man, was admitted into Hospital on the 27th December, under the care of Dr. Fenwick, suffering from the results of a gun-shot wound. It appears that on the 28th November previous, while on their return from deer hunting, he and his companions sat down to rest. Cameron was sitting on the ground, resting on his left arm, which bent his body over to the right side, which was uppermost; he was about four yards from one of his companions, who had his gun resting across his knees. While in this position, the gun accidentally exploded, and the contents entered Cameron's right side about 3½ inches above the crest of the ilium, carrying before it the points of the two lower ribs, passing through the ascending colon. Following a course upwards and backwards, it passed out of the back to the right of the spinal column, on a line with the spinous process of the last dorsal vertebra. The gun (an old musket) was loaded with three balls, or slugs. There are two distinct points of entrance, the upper opening has cicatrized, the lower, which opened into the bowel, is still patent, though daily lessening in size. The point of exit is seven inches from the point of entrance, and there exists an ulcer about the size of the palm of the hand, rather deep and excavated, but which is granulating and healthy in appearance, although the discharge of pus is considerable which is exciting a baneful influence on his constitution. There is a small spicula of bone bare,—a portion of one of the ribs,—but which is firmly attached, and is keeping up the irritation and discharge. At the time of the accident there was very trifling hemorrhage; nor did he suffer subsequently from fever nor symptoms of peritoneal inflammation. The margin of the wound in the intestine has united to the edge of the external orifice by adhesive inflammation; air, fluid contents,

and fœcal matter escape through the aperture, requiring constant washing. At the time of admission, his general health was highly favorable, and has continued to improve under tonics and nourishment. It was not deemed advisable to interfere with the process of nature to effect a cure, attention alone being paid to the general health of the patient, and the daily administration of an enema, to empty the lower portion of the intestine and prevent atrophy from disuse; the artificial opening meanwhile being closed by a pad and bandage, which favors the passage *per viam naturalis.*

This case presents many points of interest, which are worthy of record. At the time of his admission, the opening into the intestine was circular, and about two inches in diameter. Five weeks had elapsed since the injury, during the whole of which time the lower portion of the intestine had never been acted upon. At times the aperture was perfectly empty, and the mucous lining of the intestine could be seen. There was no spur, as is described by authors, as existing in these cases; a portion of the calibre of the gut only had been removed. Moreover time had not sufficiently elapsed for the formation of a spur by cicatrization and alteration of the textures. It is somewhat remarkable that peritonitis did not supervene, and we may reasonably suppose that the peritoneal cavity was not opened at the time of the accident, nor indeed subsequently. The caput coli lies behind the peritoneum; and frequently so does the ascending colon. From the position of the wound, we would almost expect that injury to the lower free margin of the liver had occurred. Such however could not have been the case. Most probably the liver was protected, being shoved up out of the way of injury, as the body was inclined to the right side. Altogether, the case is unique and worthy of record from its rarity, and the singularly fortunate results as regards the poor man. Cases of spontaneous cure are given by Mr. Erichsen; and one, having a similar result, occurred in the practice of a physician in the neighborhood of Montreal, but which is not of record.

The opening at this date, February 3, is about the size of a pea, still leading into the bowel. For the last few days the patient has been able to evacuate the bowel without the use of an enema. Very little feculent matter passes through the false opening.

Montreal, General Hospital, February, 1865.

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*Case of Protracted Utero-Gestation.* By JAMES A. GRANT, M.D., F.R.C.S.E., M.R.C.P.L., &c. Physician Protestant General Hospital, Ottawa.

On the 4th Dec., 1864, I was called upon to visit Mrs. C., æt. twenty-four years, and about to be delivered of her second child. Labor, which

was natural, terminated in about four hours. Almost immediately on the removal of the placenta, which was detached and expelled after the lapse of half an hour, without any difficulty, violent hemorrhage supervened, and, notwithstanding every exertion, continued more or less, for several hours, attended by the well-marked indications of excessive depletion. Gradually the uterus contracted more firmly, and at the expiration of two days the patient appeared to suffer little from the loss of blood she had sustained. According to the calculations of Mrs. C., who was most careful in noting down the particulars of her case, the catamenial discharge was arrested Jany. 20, 1864. Quickening first felt 4th June. The first experienced *motion of the fœtus* "occurs when pregnancy is advanced half way:" Dr. Tyler Smith. "Takes place at the sixteenth week:" Dr. Churchill and Dr. Denman. "It takes place between the sixteenth and eighteenth week:" Dr. Ramsbotham. A much wider range is taken by Dr. Montgomery, who says, "Experience has shown that it happens from the tenth to the twenty-fifth week." On this point we observe that authors do not agree precisely, but the great balance of opinion favors the belief that at the fourth or fourth and a half month, the movements of the child are sufficiently strong to make itself felt, and that anterior to this its movements are so feeble as not to be perceptible by the mother. On this point Dr. Churchill, p. 109, quotes from Dr. Montgomery: "the writer can speak with certainty, having now in several instances, by applying the hand to the abdomen, distinctly felt motions of the fœtus in utero, while the mother had no perception of them." This want of perception has continued even to the completion of the full term of utero-gestation. "Cases occur where no sensation is perceived by the mother," Dr. Churchill, p. 109. Not alone on this point do physiologists and obstetricians differ; but the whole subject of *utero-gestation* is one in which there is considerable diversity of opinion. In the investigation of any such case, information may be obtained on three points, viz., the time of last menstruation, the time of quickening, and the period of delivery, which can be relied upon; but as to the first two in the great majority of cases, extra reliance cannot be placed on the *ipse dixit* of the woman, who, unknowingly, may have miscalculated the reckonings by which she is guided, as to the particular time when these functional alterations may have taken place. Nature seldom deviates from her established laws, still exceptional cases are occasionally met with. Any such, proceeding beyond the natural period of utero-gestation, being of special interest in a medico-legal point of view, should not escape observation.

The Renée and Gardner peerage cases are striking examples of the

disagreement which has already existed among medical men on this subject. Dr. Tyler Smith, p. 229, says, "In a practical point of view we may consider that the average duration of pregnancy is about 288 days from the date of the last catamenia, or about 274 or 275 days from the time of coitus, when this can be ascertained." Many remarkable cases are on record in which the period of utero-gestation has been abbreviated without destroying the life of the child, from causes not natural, and of the prolongation of that period, many equally interesting, are stated by authors of the highest standing. As examples of early viability I would cite the case of "Fortunio Liceti, said to have been born at four and a half months, and to have lived to eighty years, also that of Dr. Rodman of Paisley, of a child born between the fourth and fifth month, length 13 inches, weight 1lb. 13 ounces, avoird. At nine months this child was alive and doing well." Dr. Guy's Forensic Medicine, ps. 125, 136. Of protracted utero-gestation, the following remarkable cases are abridged from Beck's Medical Jurisprudence by Dr. Dewees, p. 135. "Bartholin says a young woman declared herself to have been seduced, she was strictly guarded after this, and was delivered, sixteen months after of a living child." Foderé, vol. ii, p. 183.

"In 1638 a woman was delivered of a child one year and thirteen days after the death of her husband. She suffered with severe labor pains one month previously. The child's head was without fontanelles. The Faculty of Leipsic declared it to be legitimate." Valentine's Pandects, vol. i, p. 142.

"A man died on the 2nd of December, 1687, after being eight days *in extremis;* 16th of October following, his wife was delivered of a son. The Faculty of Geissen declared it to be legitimate." Ibid.

In the case of Mrs. C., following the usual method of reckoning, midway between the last monthly period and the next time at which the catamenia should have returned, the period of utero-gestation is fully 305 days, and from the date of the last catamenia 320 days. If then the data of Mrs. C. are correct, which I have no reason to doubt, the infant was in utero according to the shortest calculation 25 days beyond the usual 40 weeks; or taking the full extension of time as computed by Dr. Tyler Smith, 40 days beyond the natural period. Not alone in the human family, but in every class of the mammalia, there is a common and general period for the termination of utero-gestation, and yet we meet with occasional deviations from the usual course of nature. As to the functions of the human body, how variable both in time and degree are menstruation and child-bearing. Thus from a combination of circumstances we are led to believe, with the balance of authority both

ancient and modern, that there may be a possibility of the extension of the normal period of utero-gestation.

Ottawa, January, 1865.

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## REVIEWS AND NOTICES OF BOOKS.

*Elements of Materia Medica, containing the Chemistry and Natural History of Drugs, their effects, doses, and adulterations; with observations on all the new remedies recently introduced into practice, and on the preparations of the British Pharmacopœia.* By Dr. WILLIAM FRAZER, Lecturer on Materia Medica to the Carmichael School of Medicine, &c., &c. Second Edition, 8vo. pp. 453. London: John Churchill & Son; Dublin: Fannin & Co.; Edinburgh: Maclachlan, Stewart & Co. 1864.

Owing to the numerous changes which have occurred in materia medica during the past few years this may be considered a new work as its pages have been re-written. The preface to the first edition has been omitted. This is to be regretted, as the preface to a work forms a species of record which indicates the date of its first appearance. However, as this edition may be considered in every respect a new work, the author has most likely thought proper to commence *de novo*.

The plan adopted by our author is based upon the natural history of substances under consideration. This the author prefers, and perhaps with reason, to the grouping according to special therapeutic action, which classification is followed by many writers on materia medica. This arrangement is certainly admirable in many respects, as thereby are grouped together substances closely allied in their chemical and botanical characteristics, and as a natural sequence, related in their medicinal properties. The author observes:

"As this book is intended for every day use by the practising physician, who requires condensed and reliable information about the properties and doses of the remedies that he employs, I have endeavored as far as possible to restrict it within moderate limits, and, to increase its usefulness, have included notices of all those substances which, though not officinal, appear to possess the slightest claim upon our attention. It would be easy to augment the list to almost any extent; it has proved more difficult to form a fair selection of those articles that seem deserving of our investigation. I trust that the student in medicine will find in these pages a satisfactory guide in acquiring a knowledge of therapeutics;

much of his success in life will depend on a proper application of the resources of materia medica to the treatment of disease; and after long personal study of this special branch, I may be permitted to offer him a few words of advice: never condescend to employ routine or trivial prescriptions, nor use any remedy without being able to give a satisfactory reason why you have ordered it; above all, never employ any substance without endeavoring to understand its properties fully, and the ordinary effects it may be expected to produce. Therapeutics, regarded in its proper position, is one of the most practical departments of our art; it should never be applied to purposes of quackery, or to dishonest attempts at acquiring a reputation through the ignorance and credulity of our fellow-beings."

The work is divided into three parts, and concludes with a supplementary list. In the first part are described chemical materia medica, where are given succinctly all inorganic substances.

Under Part II are described vegetable materia medica; and Part III is devoted to the consideration of animal materia medica. At the end of the volume is to be found a table of weights and measures in conformity with the recent edition of the British Pharmacopœia; also tables of weights and measures of the British Pharmacopœia with their French metrical equivalents; also weights and measures of the American Pharmacopœia. These tables are of great use for reference. We have found them especially so, while perusing French works and papers. Another most valuable addition to this work is a posological table, in which will be found the quantities given, as a dose, intended for adults. Dr. Frazer conveys in his volume in short and concise, yet clear language, all that is really necessary to know on the subject of materia medica,—and in this is constituted the real value of the book. It is no voluminous nor laboured work, like those of Pereira, Stillé, and others, but a work suitable for reference by both student and practitioner. It is got up with the usual care of English publishing houses, the typographical execution and paper being of superior excellence. Dawson Brothers, Great St. James St., are prepared to import it for such persons as are desirous of obtaining a copy.

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We beg most sincerely to thank Dr. William Frazer, Lecturer on Materia Medica, in the Carmichael School of Medicine, Dublin, Ireland, for the great interest he has taken in the Canada Medical Journal, for his kindness in forwarding us many of the new works issued in the Irish Capital, and for effecting an exchange for us with the Dublin Quarterly Journal of Medical Science.

*A Treatise on Gonorrhœa and Syphilis.* By SILAS DURKEE, M.D., Consulting Surgeon to the Boston City Hospital, &c., &c., &c. Second Edition, revised and enlarged. With eight colored engravings. Philadelphia: Lindsay & Blakiston. 1864. Royal 8vo. pp. 467.

The subject of diseases of venereal origin, is one of deep interest, and is at the present day engaging the earnest attention of the whole profession. Many theories have been advanced, and views have changed within the last few years; but still this class of disease is regarded as the "opprobrium of Surgery"—an opinion first propounded by the late Dr. Abraham Collis, and shared in by all writers on this subject, since his day. Some years since, the author of this work obtained the Boylston prize, Harvard University, for an essay—subject, "the Constitutional treatment of Syphilis:" that essay formed the basis of the present work, and is a proof of the benefit which may accrue by holding out inducements to men to study any particular class of disease, and give the results of their labor to the world. Some of the most able monographs in the English language have been written as competitive essays.

The work before us is divided into thirty-nine chapters. The opening chapter is on blennorrhagia. We take exception to a remark which occurs on the very first page, wherein the author states that "at the present day the more enlightened members of the profession agree in the opinion that gonorrhœa *is not a venereal affection.*" The italics are ours. A little further on he states that gonorrhœa is the result of "impure sexual congress." We freely admit that gonorrhœa is not syphilis; but that it is a venereal affection or the consequence of the act of venery, is undeniable.

Dr. Durkee is adverse to the employment of the abortive treatment for gonorrhœa. At pages 34 and 35 he states:

"The abortive treatment has the sanction of the most eminent surgeons. The most important element in it consists in the use of strong nitrate of silver injections. Every practitioner must see that this mode of assailing the disease in its hidden retreat is attended with risk, especially if a solution of ten grains to the ounce be employed. It is, as it were, attacking the enemy by storm. The syringe, charged with the potent liquid, cannot, at any rate, be wielded by the patient with entire safety; nor can the danger attending its use be essentially diminished if the instrument is handled in the most adroit and cautious manner by the surgeon; for, from the very nature of things, even he cannot regulate the precise degree of local impression produced by the fluid. In this particular it will obey

no man's wishes. The instant it is forced from its confinement it glides like a swift torrent along the urethra; and its work, whether for good or evil, is accomplished instantaneously."

"The intense pain which always follows the application of the strong injection is a serious drawback upon its use. Another objection is, that in many instances it not only fails to benefit the complaint, but creates an aphthous condition of the mucous membrane, or sloughing ulcerations, which prove exceedingly troublesome, and are often more difficult to cure than an ordinary gonorrhœa. From the moment the use of the syringe is commenced, an exacerbation of the urethral inflammation is liable to ensue; the discharge also increases, and in some instances the testes suddenly enlarge to three or four times their normal size, Some patients, not of a sanguineous temperament, will tolerate stimulating, and even somewhat caustic injections with impunity—perhaps with advantage; but if in any given instance a peculiar susceptibility should exist, the fact cannot be known until the remedy has been tried. In such a case, although the lesion may occupy but a mere point before the injection is introduced, it may immediately afterwards, and as a direct consequence, extend indefinitely to the sound portions of the canal. The spontaneous tendency of the disorder is to spread along the mucous membrane, and even to penetrate the deeper tissues; and any auxiliary impulse from the hands of the patient or physician might augment the mischief. If the surgeon can have entire control over the patient, and be certain that his directions will be carried out to the letter,—as, for instance, where the case is admitted within the walls of a well-regulated hospital at a seasonable time,—then the abortive treatment may be entitled to all the confidence, praise, and success which its advocates claim for it; but, for ordinary private practice, too many objections lie in the way of its adoption."

We cannot agree with the views here advanced. We have, during the past twenty years, practised the abortive treatment in suitable cases, and with such satisfactory results that we feel no desire to abandon such line of practice. It is certainly preferable to the nauseous specifics copaiba and cubebs, which appear to us very frequently to do more harm than good. Certainly we pity an unfortunate patient if obliged to resort to these remedies, as their use is often followed by dyspeptic symptoms which will last for months after all trace of the gonorrhœa has disappeared. We have treated several hundred cases by the abortive plan, and certainly never saw it occasion an aphthous condition of the mucous lining, nor sloughing ulcerations. We always, as a matter of course, select our cases, and never attempt to use the injection during the persistence of acute inflammation; and we have used injections more than once of the strength of twenty-five grains to the ounce.

There is a chapter on gleet, which contains many valuable hints, which will repay a careful perusal.

" The most common seat of blennorrhœa is the vicinity of the membranous or prostatic portion of the urethra; the lesion, however is sometimes situated in, or near, the fossa navicularis, as an acute urethritis. It is generally easy to determine when it is seated at the latter point; for if it be, moderate squeezing of the glans penis will force the matter out at the orifice of the urethra; whereas this cannot be so readily done if the discharge proceeds from a portion of the canal farther back. Sometimes the locality may be ascertained by pressing the integument along the urethra. The patient will complain of being hurt when the diseased spot is reached.

" Occasionally, a preternatural redness and turgescence of the lips of the urethra remain after the discharge has ceased. This deviation from the healthy appearance is, of itself, an affair of little moment. It is, however indicative of a more profound abnormal condition, which may still be lurking in the mucous lining of the canal in Cowper's glands, or in the prostate, either or all of which parts may have been, at some period of the disease concerned in the production of the morbid secretion, and may still be the seat of subacute inflammation; and so long as this continues is liable to a relapse from the most trivial excess or imprudence."

" Of all local remedies, blisters stand at the head of the list for the cure of all cases of gleet not dependent on stricture or otherwise complicated. They may be applied along the whole length of the penis, except two or three lines towards the preputial orifice. As soon as vesication has taken place, the organ may be lubricated with equal parts of lime water and olive oil, or the benzoated zinc ointment, and wrapped in a linen rag. Of late I have used cantharidal collodion in preference to blistering cerate. The collodion may be applied by means of a camel's hair pencil. After the evaporation of the ether, which takes place in a few seconds, the parts may be protected with linen rag. The vesicating substance should be applied at bed time. If the surgeon propose to blister the perineal integument, he will find the collodion much more convenient than any other substance. It is better adapted to the uneven surface than plaster, does not stain the linen like tincture of iodine, and acts more powerfully and rapidly than the latter."

In chapter four to twelve inclusive are discussed *seriatim* the various conditions which not unfrequently follow or accompany an attack of gonorrhœa, such as orchitis, epididymitis, herpes, eczema, irritable bladder excoriations, urethral pains, spermatorrhœa, &c.; gonorrhœal ophthalmia, and ophthalmia neonatorum, have each a chapter. There is a chap-

ter on gonorrhœal rheumatism, one on vegetations; and the subject of blennorrhagia in the female is under separate consideration. In this chapter are fully considered the claims of the speculum vaginæ as a means of aiding our diagnosis. Recamier of France was the first to restore this useful instrument to the profession, though not his invention, as, a tube for examining by the eye the condition of the uterus, has been in use by surgeons for over two thousand years.

"It not only gives clearness and precision in diagnosis, but it can be employed as a surgical guide to render more facile the application of caustics or escharoties, in the use of which caution and exactness of manipulation are necessary. The speculum may, without impropriety, be regarded as suited to a numerous class of females who require medical and surgical treatment, and who are always anxious to be cured in the shortest time possible.

"With the instrumentalities now at his command, the intelligent practitioner asks only for a few days to accomplish a cure of maladies, which, while the speculum was ignored, were subjected to a tedious and oftentimes random treatment of many weeks or months.

"Professor Bennett, speaking of inflammation of the vagina and vulva, says that he considers the secretion of a great quantity of pure pus from the vaginal mucous membrane as all but pathognomonic of blennorrhagic inflammation. 'An important fact in connection with vaginitis,' says he, 'to which I have already drawn attention, is, that it seldom exists for any great length of time as a primary disease, whether purely inflammatory or blennorrhagic, without extending to the mucous membrane of the cervix. Hence it is, that blennorrhagia, a disease in which the inflammation no doubt commences in the vagina and vulva, the cervix is nearly always, after a short time, found to be congested and inflamed, and eventually, if the disease is not cured, ulcerated. Like those who have preceded me, I am unable to point out any absolute means of distinguishing between simple inflammation of the vagina and blennorrhagic inflammation, although I am convinced that a difference does exist. This indeed, is proved by the fact that simple inflammation of the vulva and vagina does not, as a general rule, communicate blennorrhagia to the male, although I admit fully that an occasional exception may take place. My dispensary patients are nearly all married or single women, amongst whom I seldom meet with syphilitic disease, and in the higher ranks of life it is still more rare, not existing in one uterine case out of fifty for which I am consulted. Nearly all these females in both classes of the community are suffering from vaginitis, as described above, in a more or less acute form, when they apply for advice; and yet although they have

generally lived with their husbands up to the time they consult me, the wife has nearly always a tale of sorrow to record; her husband is wild, dissipated, keeps bad company, sleeps out at night, and, generally speaking, has confessed to her that he has exposed himself to contagion.' "

The remainder of the work is devoted to the consideration of syphilis. Under each head are considered chancre,—the different forms met with,—bubo, secondary syphilis, syphilodermata, ulcerations of the mucous surfaces, syphilitic affections of the nostrils and nasal fossæ either secondary or tertiary; iritis, tertiary syphilis, the organs and tissues involved; and the concluding chapter is on infantile syphilis. There is incorporated with the work a formula of remedies: and throughout in every chapter will be found many important and valuable prescriptions which the author has used with benefit. There are eight colored lithographs, but which are not good, as they do not serve to illustrate the condition intended.

The author has shown great industry in the preparation of this work, and deserves great credit, as he has produced an eminently practical volume. The publishers have done their part to perfection. The paper is excellent, and the type clear and distinct. Coming from the house it does, Messrs. Lindsay & Blakiston, it would surprise us were it otherwise, as their publications are always most carefully got out. Messrs. Dawson Bros. have several copies of the work on hand.

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*The Book of Prescriptions.* Containing 3000 prescriptions collected from the practice of the most eminent Physicians and Surgeons, English, French, and American, comprising also a compendious history of the materia medica; lists of the doses of all officinal or established preparations, and an index of diseases and remedies. By HENRY BEASLEY, author of "the Druggists' Receipt Book," and "the Medical Formulary." Philadelphia, 1865: Lindsay and Blakiston, pp. 562.

This work has been issued with a view of supplying a want long felt; the present edition having been increased by the careful selection of 100 additional prescriptions from English and foreign authors.

In it may be found, under the head of each remedy, the manner in which that remedy may most advantageously be prescribed or combined with other medicines in the treatment of disease.

There is a short description of each medicine and a list of the doses of the several preparations which will be found most useful.

In the matter of doses the reader will find considerable variety; the

through the wound. If the incisions are properly made, the urine will flow through the wound without difficulty. The patient should be put on his left side, a layer of mackintosh under the buttock; the feet should be tied together, the thighs slightly flexed. The diet should be nutritious, and an opiate should be given at night-time if necessary. Cases for the most part do very well, unless there should be disease of internal organs, and more especially if the kidneys be affected.

It has been asserted that in the London hospitals the mortality from lithotomy is 1 in 4 $\frac{1}{16}$. Whether such a statement be true or not in the aggregate, it is hard to say. There may be incompetent operators or ill-ventilated or badly-arranged buildings. In St. Bartholomew's Hospital the mortality is about 1 in 10, nearly the same as in the days of Cheselden. I have had six consecutively successful cases, and others of my colleagues could give an equally favorable return.

I directed your attention to the case of a young man in Pitcairn ward, who is convalescent from the lateral operation performed nearly three weeks ago. You may remember that he suffered severe pain in micturition, and was liable to epileptic fits in rapid succession. The stone, when extracted, was found to be composed of oxalate of lime; it was as black and as nodulated, and in size the counterpart of a mulberry. Since the operation the lad has had but one slight epileptic seizure, and that during sleep. He is now so far recovered that I can scarcely persuade him to remain in bed.

As in the male, so in the female, I should say, dilate, but do not divide more than is absolutely necessary. Those who have not tried will scarcely believe the extent to which the female urethra, the homotype of the membranous and prostatic portions of the urethra in the male, will yield to slow distention.—*London Lancet.*

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# Medicine.

## INSUFFLATION AS A REMEDY IN INTUSSUSCEPTION.

By David Greig, M.D., F.R.C.S.E., Dundee.

Intussusception, or invagination of a part of the intestinal canal, is by no means a very rare accident in early life, and is in general one of the most fatal of infantile diseases. There are few practitioners who have not met with cases of this kind in the course of their professional duties. Many of these cases have been diagnosed during life, and the diagnosis confirmed after death; many, I have no doubt, have died without a

correct diagnosis having ever been made; in some, a correct diagnosis has been made, and nature has effected a cure without any interference; and in a few cases, the physician, after having made a correct diagnosis, has been able to render active and all-important service. The causes of intussusception are unknown, but in all probability the most frequent is spasmodic contraction of a portion of the bowel, and relaxation of the adjoining part.

Intussusception occurs much more frequently in early life than at any other period. Cases of intussusception are usually divided into non-inflammatory and inflammatory, and may occur in any part of the intestinal canal. The former, or non-inflammatory, no doubt frequently takes place during life as a temporary derangement, and is frequently met with in the small intestines when post-mortem examinations are being made, where their presence was never suspected, and which gave rise to no symptoms or uneasiness during life. The greater part of three hundred children, examined by M. Louis, who had died at the Saltpetrière Hospital in Paris, had two or more invaginations of the bowels, without any inflammation, or any signs that these had been injurious during life, leading M. Louis to the conclusion, "that an intussusception may be formed and destroyed again by the mere action of the intestine;" an opinion confirmed by Dr. Baillie, who, in his work on Morbid Anatomy, says,—"In opening bodies, particularly of infants, an intussusception is not unfrequently found, which had been attended by no mischief; the parts appear perfectly free from inflammation, and they would probably have been easily disentangled from each other by their natural peristaltic motion." Even in my own experience I have very frequently met with cases of this kind, and one case in particular which came under my notice in the Crimea, in which I found no fewer than twenty invaginations in the small bowel. This was in the case of a strong robust soldier, who was seized with cholera one morning while on parade, and died within four hours. The nature of the disease in this case may account for the invaginations.

These appearances are interesting in a pathological point of view, but what we have to deal with at present is the true inflammatory intussusception, which has always been recognized as a very fatal complaint.

Every intussusception consists of three parts, the external part or covering, which is formed by that portion of the bowel into which the other has slipped, and the middle and internal, which consist of the invaginated part doubled upon itself. It is these two latter which are acted upon by the first, compressed, constricted, strangulated; and, as a matter of course, inflammation and sloughing ensue. Cases are recorded

prescriptions are not all of merit, nevertheless it is a most valuable addition to the library of the practitioner, in fact, a book which will be found of use if left for constant reference on his table, not that he need be tied down to the practice of others. As a general rule the phases of disease differ widely in each case; many things have to be taken into account, and the successful practitioner is he who exercises much judgment in the selection of his drugs, and is capable of giving a reason for adopting any special line of treatment—one who does not servilely follow the teachings of any man with regard to medication. The work contains opening chapters on signs and abbreviations occurring in prescriptions, also a list of Latin words and phrases frequently met with in prescriptions; this part of the work is more adapted to the use of the druggist's clerk, as we must suppose that the educated physician is fully aware of the terms in use in prescribing, although we may here remark that it is better to write all directions in plain English.

The work contains a comprehensive index of diseases and the remedies adapted for each, which is very carefully prepared and of great value. It is a handsome volume; well got up; printed on excellent paper, and the typographical execution superior. It is to be had of Dawson Bros., Great St. James Street.

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# PERISCOPIC DEPARTMENT.

## Surgery.

### CLINICAL OBSERVATIONS ON LITHOTOMY.

BY HOLMES COOTE, ESQ., F.R.C.S.

GENTLEMEN,—The anatomy of the perineum has been made unnecessarily complicated by the arbitrary subdivision of the fasciæ into numerous layers, which do not exist in nature. We meet successfully with the skin; subcutaneous tissue and superficial fascia; the muscular fascia; the layer of muscles—namely, erector penis, accelerator urine, &c.; the interosseous membrane or ligamentum triangulare. Beyond this lies the pelvic fascia. Remember these two points; first, the triangular ligament does not extend below the urethra; secondly, the vessels of the perineum are very irregular in their course and distribution. The distance between the neck of the bladder and the surface of the perineum depends on the thickness of the subcutaneous strata, varying from two to four inches. The neck of the bladder lies about an inch behind the

symphysis pubis, in which spot it is held firmly by its ligaments. It is a fault with many surgeons to cut too much backwards when the knife leaves the groove of the staff and runs between the bladder and rectum. The operation is always an anxious one, because the greater part is performed on structures which are out of sight; but, when difficulties arise, they almost invariably proceed from the fact that the surgeon has missed making a proper opening for the extraction of the stone. In this hospital, where high antiquity gives a traditional interest to its rules, it has never been in my remembrance the custom to draw off the urine just before the operation, and to distend the bladder by the injection of warm water. Such a proceeding is unnecessary and tedious, and is apt to disturb parts. But the rectum is always carefully emptied by means of an injection, and the patient is enjoined to hold his water as much as possible. The position of the patient is that commonly adopted elsewhere.

I do not recommend that the first incision be very deep. When the skin has been divided to the proper extent, the fat and subcutaneous tissue will readily yield to any amount of pressure. By adhering to this rule you often avoid wounding arteries of considerable size, or even a part of the bulb. The point of the forefinger of the left hand should then feel for the staff as it lies under the pubes, and the knife should be made to enter the groove by being pushed obliquely upwards, inwards, and backwards, so as to pass if possible *behind* the bulb and its arteries, being introduced about the middle of the external wound.

The membranous part of the urethra is that usually first opened, and some urine often escapes; but do not hurry the withdrawal of the staff. Press the knife onwards, followed by the left hand, until you can get the forefinger well into the prostate, when in most instances you can dilate to a sufficient extent. I believe the more we dilate and the less we cut the better. In a case which I had the opportunity of examining, the membranous part of the urethra was opened, the prostate partially divided, and the neck of the bladder had the smallest possible incision. In the choice of instruments, every surgeon has his own fancy. I commonly complete the operation with an ordinary knife; but in cases of very deep perineum a beaked knife is to be preferred, and in this case it is perhaps better that, as he presses the instrument through the prostate, the surgeon should depress the handle of the staff with his left hand. The stone is removed either by the forceps or the scoop. It may sometimes be turned out by the finger. There is no need of alarm should a moderate amount of hemorrhage ensue; indeed patients in whom this occurs seem often to make the most rapid recovery. Death from hemorrhage is extremely rare. Do not introduce a gutta-percha tube into the bladder

used with success by Mr. Gorham. Fortunately, Dr. Nimmo had in his library the volume of Guy's Hospital Reports, which contained Mr. Gorham's paper on the subject, and after each of us had perused that paper, it was resolved to give the remedy a trial, as a last resource, and in truth with no very great hopes of benefit.

The nozzle of a small pair of bellows was introduced into the anus, and air injected to a considerable extent. Contrary to our expectation the air passed readily into the bowel, and seemed to give the child great relief. After the injection it lay very quiet, as if asleep, and evidently quite free from pain. In about twenty minutes from the time the air injection was administered, a slight rumbling noise was heard in the child's abdomen, followed by a crack so loud and distinct as to alarm the attendants in the room, who thought something had burst in the child's bowels. The child, however, continued as if asleep and free from pain, and in about half an hour a large feculent fluid stool, slightly mixed with blood and mucus, was passed without pain. During the night the child rested pretty well, had no return of vomiting, took the breast as usual, and in two days was quite well.

*Case II.*—W. C., a fine, healthy, male child, nine months old, never having had a day's sickness, was taken ill on Friday, the 7th August, 1863. He was quite well in the morning, and his bowels were freely moved about 5 a.m. At 12 noon, without any warning, he was suddenly seized with very severe sickness and vomiting; he became deadly pale, and his skin was covered with a cold clammy sweat. In a short time he recovered from this state; he became warm, and his countenance resumed its natural appearance. He was, however, restless, and seemed to have thirst, but immediately on getting a drink of milk he fell into the same faint state, and the milk was ejected from the stomach with violence, the child, before the vomiting, evidently suffering great pain. Even a spoonful of cold water was not retained above a few minutes. The child continued in much the same state until I saw it at 11.30 p. m. At that time it seemed to be suffering from paroxysms of pain, which seemed to come on about every twenty minutes, and the sickness and vomiting continued almost as bad as at first. The skin was warm and moist, the countenance pale, pulse 120, thirst very great, and everything liquid was taken with great eagerness; it even took the breast with as great a relish as it did when in health. Immediately after anything was taken into the stomach, it would lie quiet for a few minutes; it would then become restless, and this restlessness would increase, until, during one of the paroxysms of pain, everything would be ejected from the stomach; and this was repeated again and again. The abdomen was flaccid and soft; but a dis-

tinct, hard swelling, or tumor, could be felt under, and to the right of the umbilicus, which seemed to be somewhat tender on pressure. A spoonful of castor oil had been given in the afternoon, but was immediately vomited. The bowels had not been moved, but there was some tenesmus, and before I had been long beside the patient, about a spoonful of slime and florid blood passed from the bowel. I had not the slightest doubt that the case was one of intussusception, and proceeded to administer a warm-water enema; but the same peculiar spasmodic state of the bowel, which was mentioned as existing in the former case, was again found here. In order to overcome this, I tried to plug the injection pipe into the anus with lint; but it was of no use, the injection seemed to give the child great pain; very little of the water would go up the rectum, and the little that I did succeed in throwing up, remained a very short time, and only brought away more blood. Nothing came from the bowels but fluid blood and frothy mucus, in which were found shreds of mucuous membrane. This state of matters continued until two o'clock on Saturday afternoon, when I resolved to try the insufflation of the bowel.

Having got the tube of an ordinary elastic enema fitted on to the pipe of a small pair of bellows, I threw a considerable quantity of air into the rectum. It passed very readily into the bowel, there was no straining or attempt to expel it, and it seemed to give the child great relief. It had taken some milk from the breast shortly before this, and although the sickness was coming on as usual with a paroxysm of pain, the insufflation seemed to relieve the pain, and the milk was not vomited. I waited for an hour, and as the sickness was again threatening to come on, and fearing I had not thrown in enough air, I administered another insufflation, and continued the process until the belly showed signs of considerable distention, and the child seemed to be somewhat uneasy in consequence. At this time I also administered a teaspoonful of castor oil, and was pleased to see the stomach retain that also; and from this time there was no more vomiting. After this the child fell asleep, and slept for about half an hour, awoke, was inclined to be amused, but still seemed uneasy. Warm fomentations were applied to the belly, which seemed to give relief. From this time the child seemed free from pain, and for the most part slept until about five o'clock, when a copious stool was passed, fluid in consistence, and mixed with some blood: from this time the child was quite well, took the breast with eagerness, retained what it took, bowels became regular, and it soon made up in flesh what it had lost during its short but severe illness.

*Case III.*—J. C., aged 10½ months, a healthy female child, never had

where inflammatory intussusception has taken place in the small bowel; these are, however, not very frequent. By far the greatest number take place at the ilio-cœcal valve, and are caused by the slipping of the lower portion of the ilium through the valve and into the cœcum. By the peristaltic action of the cœcum and colon, more and more of the small bowel is dragged through the valve, whose spasmodic action will prevent any returning; and when, owing to the mesentery, etc., no more can be dragged through, the cœcum is taken into the colon also, and this is generally the state of matters when such a case is examined after death. The peculiar anatomical characters of this part of the bowel are what we should expect to favor the formation of an intussusception, and to retain one when formed. That the great majority of intussusceptions are into the larger bowel, is a practical fact well worth bearing in mind, because an intussusception below the ileo-cœcal valve is much more amenable to treatment than one above it. This intussusception generally occurs in healthy children; its presence is shown by a regular series of well-marked and almost unmistakable symptoms. The case, as might be expected, runs a rapid course, and death generally takes place on the third or fourth day.

Much has been written about this serious complaint, but by far the most complete and practical paper on this subject, is one by Mr. Gorham, in the third volume of Guy's Hospital Reports, which I would beg leave to recommend to the perusal of all my medical brethren who wish information on this subject. In that paper, Mr. Gorham not only gives a very good description of the disease, but was, I believe, the first in this country who used insufflation as a remedy for it, having taken the hint from some successful cases of the kind recorded in the American Journal of Medical Science. That nature does succeed sometimes in restoring the bowel to its natural condition, there is every reason to believe; but it is not by any means a frequent occurrence. Dr. West well remarks of the cases recorded in medical journals, "I have observed only one instance in which the symptoms of intussusception having existed in a marked degree, at length spontaneously ceased, and were followed by the restoration of the infant to perfect health."

The diagnosis, symptoms, and treatment of such cases will be best illustrated by the narrative of five cases which came under my observation singularly enough, all within a very short period; in consequence, my attention became specially directed to the nature of this disease.

*Case I.*—M. S. G., a stout, healthy female child, six months old, always enjoyed good health, never having had a day's sickness; never had any food except breast milk; never troubled with diarrhœa or bowel

complaint. Was in her usual good health on Monday, 13th October, 1862, up to six o'clock in the evening, when, without any obvious cause, she suddenly became fretful, kicking with her feet, bending the body backwards, and screaming. In about ten minutes she became very sick and vomited severely. The skin became cold and clammy, the countenance pale, and the lips livid. In a little while she revived, but soon became restless and as sick as before. She seemed to have great pain in the abdomen, which came on in paroxysms, and to increase in intensity until she vomited, when she would seem relieved a little, or at least so faint and sick as not to scream. When given the breast, she would take it readily; but as the sickness and vomiting, with a paroxysm of pain, immediately came on, she latterly refused it. Immediately when she was seized a spoonful of castor oil was given, and hot fomentations were applied to the abdomen. The castor oil was soon ejected from the stomach, as was also a small purgative powder which was given. A warm-water enema was attempted to be administered, but the bowel seemed to be in such a state of spasm that none could be thrown up. About 8 p. m., tenesmus came on, and she passed a little fluid blood, which continued to come with every paroxysm of pain during the night. The abdomen was soft, slightly tympanitic, and not painful on pressure, except during a paroxysm of pain, when pressure seemed to increase it. On deep pressure being made over the abdomen, under the umbilicus, a very distinct hard tumor was felt, a little to the right of the mesial line. Seeing that the case was a serious one, and as the little patient was a near relation of my own, I asked my friend, Dr. Pirie, to take charge of the case. He attempted to give another enema, but with no better success, owing to the very peculiar spasmodic state in which the bowel was. On the morning of the 14th, as the child was no better, and as Dr. Pirie suspected an intussusception, he requested Dr Nimmo to see the case along with him. In consultation it was decided that it was a case of intussusception of the bowel. The sickness still continued, but not so severe as on the previous day. The infant took the breast readily, and after taking it would lie still for a few minutes; pain would then seem to come on with sickness, and the milk would be ejected from the stomach with great violence, after which the child would seem exhausted and lie still for some time. It seemed to have great thirst, and took cold water greedily, which, however, was soon ejected. The pulse was about 130, small. Injections were again administered, but with the same result as formerly. As everything had been tried, and nothing had done any good, and as it was evident the child was fast sinking, it was proposed to use the air injection which is mentioned in Dr. West's work on Diseases of Children, as having been

inches of the ileo-cœcal valve were pale, and only contained flatus. The half of the ascending, the transverse, and the descending colon formed the external covering of a hard tumor, which was found to be the invaginated bowel. The invagination consisted of the lower twelve inches of the ileum and the cœcum. This completely filled the colon and sigmoid flexure to within an inch of the anus. The external covering or colon was pale, and neither congested nor inflamed; the interior of the tumor or invaginated part was very much congested and inflamed, the mucous membrane, more especially of the ileum, being of a dark color, spongy in appearance, and ulcerated, very much like the state of the mucous membrane of the bowel which is met with in severe fatal cases of chronic dysentery in tropical climates. Owing to the dragging of the mesentery, the tumor was fixed to the spine, and extended in a curved direction from the umbilicus to the left hypochondriac region, and thence to the rectum, changing the position of the colon, and accounting for the situation of the tumor. After the removal of the tumor, the cœcum was easily drawn out of the colon, and restored to its natural position; but the greatest difficulty was found in getting the swollen small bowel reduced through the ileo-cœcal valve, which seemed even then to be in a spasmodic condition.

*Case V.*—The following case, which occurred in the practice of my friend, Dr. Pirie, and which I saw along with him, has been kindly furnished to me by him as another successful instance of insufflation in invagination of the bowel.

J. M., aged four months, a vigorous thriving child, awoke on the morning of the 16th September, 1863, crying, as if in great pain, and continued during that day and the following night very restless and uneasy, the bowels not having been opened since 6 o'clock a.m. On the morning of the 17th, he passed some bloody mucus at stool, but no feculent matter, and during the day vomited frequently. At 5 p.m., when first summoned to see the child, I found him with pale anxious countenance, hurried respiration, weak, quick pulse, discharging per rectum bloody mucus; and after learning the above history, I discovered a round, hard swelling over the cœcum, and quite dull on percussion. Looking upon the case at once as a case of intussusception, I withheld the use of purgatives, and inflated the bowels, "per rectum," with air, by means of a pair of small drawing-room bellows. This was accompanied by a crackling internal sound as of air distending the lower bowel, and was followed by temporary relief from the uneasy restlessness, but no fœcal discharge.

*19th*, 11 A. M.—The obstruction and vomiting continue, but the child's aspect is not so sickly as yesterday. On inserting a long tube into the

rectum for the purpose of repeating inflation, a considerable quantity of thin fecal matter came away, and I again injected the bowel with air. 2 p. m.—Child keeps easier; skin cool; and vomiting has not returned since forenoon. The cœcal hardness continues. Repeated inflation, and also gave a warm-water enema; but this was retained for a very limited time. Mother states that child lies quieter, and appears greatly eased for a considerable time after the air inflations. 11 p. m.—Tumor continues; no natural stool yet.

20*th*.—After rather a restless night, the child got a free fecal discharge this morning at 6 a.m., and several times afterwards. At 9 a.m., I found the tumor much reduced in size, the child looking much easier, and taking the breast readily. Gave a warm-water enema; but this was speedily ejected. Ordered a teaspoonful of castor oil. By evening the swelling at cœcum had disappeared, the bowels were freely opened, and the child was thoroughly relieved.

These I look upon as five very good specimen cases of true inflammatory intussusception. Other obscure cases I have met with in my practice, presenting some of the symptoms of the derangement; but with these we have nothing to do at present. As an intussusception of the bowels cannot be seen or handled like a hernia or a fractured limb, many medical men are very sceptical when told that a certain remedy relieved such a case, and can only believe an intussusception to be present by seeing it at a post-mortem examination; this is certainly very conclusive proof, but a kind of proof we would wish to avoid, however conclusive. To my mind the symptoms of an intussusception are unmistakable, and may shortly be said to be, the sudden seizure, the obstinate vomiting, the obstinate constipation, the paroxysms of pain, the hard tumor in the abdomen, and *chiefly* the passage of blood per anum; all these various symptoms may show themselves in other diseases, but when combined together and especially when the last-mentioned symptom, the passing of blood per anum is present, I think no one can have any difficulty in forming a correct diagnosis, and must feel convinced that an intussusception is present, without the necessity of a post-mortem examination.

The prognosis of such cases is always unfavorable; and it is well for the medical man who may guard himself by stating so, whenever he has made his diagnosis. It is true, numerous cases are on record where nature has produced a cure by the sloughing of the strangulated portion of the intestine, and the junction of the healthy parts. About two years ago, Dr. Hare had an opportunity of showing to the Pathological Society of London how neatly nature completes a cure of this kind, a patient of his having died of tubercular disease only three months after suffering from

a day's sickness, had never been troubled with diarrhœa or any irritation of the bowels, was in her usual good health on the forenoon of the 30th October, 1863. In the afternoon, when out airing under the care of her nurse, she became somewhat sick, vomited a little and seemed very uneasy. When brought home, at 5 p.m., she seemed in great pain, crying and kicking violently. Her mother, thinking a pin pricking her might be the cause of this, undressed her, and finding no cause, gave her a teaspoonful of castor oil. Very soon after this the child became restless, faint, sick, and vomited. After the vomiting she seemed relieved, but soon a paroxysm of pain would come on again, terminating in sickness and vomiting or retching. When I saw her at 8 p.m., her pulse was 100, skin warm and moist; the bowels had not been moved since morning; would not take the breast; every now and then a paroxysm of pain came on, when the child cried and kicked violently. The abdomen was soft, but a very distinct hardness could be felt in the right iliac region when pressure was made over that part. Warm fomentations were ordered to be applied to the abdomen, and when I visited her at 10 p.m., she seemed somewhat easier. During the night the paroxysms of pain came on at longer intervals, and the child slept between them. On the 31st, at 8 a.m., a little fluid blood passed from the bowel, and this continued during the course of the day when the paroxysms of pain came on. There was not much tenesmus; what passed from the bowel was pure blood in small quantity, and unmixed with mucus. At 3 p.m. an injection of air and warm water was administered very slowly. The irritation of the bowel was not so great as I expected, and a considerable quantity of water and air was injected. The greater part of this came away in about ten minutes, bringing some blood and mucus along with it. It was noticed that the air seemed to remain in the bowel; the child seemed much easier, took some milk, and soon fell asleep. Early next morning the bowels moved freely, and before I saw the child in the forenoon, they had moved three times. Next day the child seemed quite well.

*Case IV.*—D. W., a fine, healthy male child, aged 4 months, who never had had a day's sickness, became somewhat suddenly ill about noon on Thursday the 12th November, 1863. About 8.30 a.m., the bowels were moved naturally, and the child seemed quite in its usual good health. About midday, it seemed very uneasy, began to cry and kick violently with its feet, as if suffering from pain in the belly. Some food was given, which it took readily, but which was immediately ejected from the stomach. The nurse, thinking that the food had not agreed with it, in about half an hour gave it some milk, which was also very soon vomited.

Some castor oil was given, which the nurse thought remained on the stomach, and was not vomited. The child slept and cried at intervals, and always, when crying, bent backward and kicked violently with its feet. About half-past seven in the evening, a few drops of blood passed from the bowel, and continued every now and then during the course of the night, always increasing in quantity, sometimes mixed with mucus, and accompanied with great tenesmus. During the night the mother gave it a warm bath, applied a sinapism over the abdomen, and gave it a little more castor oil. In the morning, as the child was no better, I was called to see it, and at once diagnosed a case of intussusception. The child was not suffering much pain, was not taking any food, was retching sometimes, but there was no vomiting. The mother was sure it had not vomited the castor oil, and on the whole she thought it somewhat better and easier; pulse 120, sharp; skin cool; the countenance was not anxious, and the eye was bright. About every hour a little tenesmus would come on, and at that time the child would pass a little frothy bloody mucus. The abdomen was not distended, but was slightly tympanitic; and when deep pressure was made at or around the umbilicus it seemed to give great pain. No tumor could be felt in the right side of the abdomen, but a very distinct hardness could be felt extending from the umbilicus to the left iliac fossa, when deep pressure or percussion was made. As the case did not appear to be very urgent, I ordered hot fomentations to be kept over the belly during the day. In the evening it was still much in the same state. I tried to administer a warm-water injection, but the rectum was so spasmodically contracted, that it was impossible to get any thrown up.

From the time when my former cases had come under my observation, I had many conversations with some of my medical brethren regarding them, and a very general opinion seemed to prevail, that nature frequently removes these obstructions without any interference on the part of the physician; and that probably had I left these cases to nature, a cure might have taken place without me. Wishing to test how far this opinion was correct, and as this did not seem as yet a very urgent case, I resolved to postpone the air injection until next morning, and in the meantime leave the case to nature. When I called next morning I found the child dead. During the night it became much worse, lost much blood from the bowel, and died quietly at 6 a.m., apparently from loss of blood, after an illness of forty-two hours.

Ten hours after death, I made a post-mortem examination of the body. It was pale and exsanguine. The rigor mortis was very slightly marked. The abdomen only was examined. All the abdominal organs were normal. The bowels from the stomach down to within about twelve

and of granules and shreds of membrane. The membranes were of the shape and size of the tubes of the stomach, and were covered with granules and fat. The cells varied from 1·1200th to 1·2200th of an inch, and were usually fringed with fine pieces of membrane. In cases of longer duration the membranes were covered with cells, and were also of the size and shape of the stomach tubes. In order to ascertain if these appearances were trustworthy as evidences of inflammation, the contents of the stomachs of forty-five subjects were examined at the Middlesex Hospital, the condtion of the mucous membrane being at the same time noted. In only one were there any fibrinous casts, and it was in acute gastritis. In eighteen there were only separate cells, chiefly of the columnar form, and in none of these was there any inflammatory action. In eight cases casts of the upper parts of the tubes were plentiful, composed only of healthy conical cells, and in all the mucous membrane was in a natural condition. In eighteen there were either plugs formed of cells and granules from the secreting parts of the tubes, or the casts of conical cells were overlaid with granular matters, and in all of these the stomach was more or less inflamed. Two cases of gastritis, unconnected with scarlatina, were also quoted as examples of the forms in which casts of the stomach tubes appeared in vomited matters during life, and the author stated that he had detected casts of the stomach tubes in matters vomited by persons affected with gastritis connected with diseased kidneys, with inflammatory dyspepsia, and other forms of inflammation of the gastric mucous membrane. It was urged that if casts of the gastric tubes can be discovered during life in cases of gastritis, and if in scarlatina this condition exists, and casts have been found in the stomach after death, there is every probability that desquamation of the epithelium takes place in this organ, as it does in the skin and kidneys.

In support of the third proposition, the results of the following experiments were given in three cases of scarlatina:—Ten grains of hard boiled white of egg were digested at a temperature of 90° for twelve hours in an infusion of the mucous membrane, to which three per cent. of hydrochloric acid had been previously added. The average loss of albumen was three grains and two thirds. Similar experiments performed with the stomachs of eleven males who died of various diseases at the same hospital gave an average loss of four grains; so that there had been scarcely any diminution of pepsine produced by the fever. As a contrast to this were the results of similar experiments upon four cases who died of typhus fever. In two of these the albumen had gained three grains of weight by imbibition, and was not at all softened; whilst in the other two it was softened, and one had lost only half a grain, the

other one grain and a half in weight. But as the activity of the digestion must depend not only upon the relative amount of pepsine, but also upon the bulk of the mucous membrane, this was also attempted to be estimated. The average weight of the mucous membrane of the stomachs of ten males dying of various diseases at the Middlesex Hospital was eighteen drachms, the weight of two recent cases of scarlatina was eighteen and sixteen drachms (the latter being in a boy), whilst it only amounted to fifteen drachms in one who died in the third week of illness. In four cases of typhoid fever the average weight of the mucous membrane only reached eleven drachms.

Under the fourth proposition it was stated that the skin had only been examined microscopically in three cases. In the first, in which the patient died after a few days' illness, the only morbid appearance in the cutis was an occasional minute extravasation of blood in the neighborhood of the sudoriferous ducts. The rete mucosum was greatly thickened, and numerous round cells with large nuclei were everywhere visible, intermixed with the natural cells. The basement membranes of the sweat-glands were thickened, and the epithelium lining them was so much increased that in most cases it obstructed their channels. In some of the sweat-glands the coils of which they were composed were loaded with coagulated blood, and were greatly and irregularly distended. In the other recent case the appearances were similar, excepting that the external layers of the cuticle were stained with blood in minute patches, and the sweat-ducts were also reddened; but there were no extravasations of blood either in the glands or cutis. In some of the ducts the epithelium was detached from the basement membranes. In the case of a man who died during the third week the sudoriferous tubes were still choked up, but in the glands the epithelium seemed in many places to be torn away, leaving the basement membranes bare, or only covered by ragged particles. The cutis was in a natural condition.

The author stated that although he had, in accordance with the usual custom, described the appearances of the skin and mucous membranes as the results of inflammation, yet that certain considerations suggested the idea that the term when so used was perhaps misapplied. In scarlatina, we find that in each part the morbid condition is mostly confined, in the first instance, to the basement membranes, and consists in the formation of layers of new cells, which, in the skin, are transformed into cuticle of natural appearance, and in the stomach contain pepsine. If future researches should prove that a similar condition occurs in the kidneys and other parts, it will be necessary to look upon the structural changes produced as resulting from increased physiological rather than from

intussusception, in which several inches of the small bowel came away on the fourteenth day of the attack. At the post-mortem examination it appeared that the portion of the small intestine came away fifteen inches above the caput coli, and so perfect was the cicatrix, that it appeared as a mere line round the bowel, with puckering of the omentum, etc., around it. I would not, however, advise any one to forego treatment and trust to nature for a cure; as, from my experience, nature is not to be trusted even when the case appears to be one of no great urgency.

As to treatment, purgatives in the first place naturally suggest themselves; but these are worse than useless, rarely remaining on the stomach, and if they do remain only stimulating the bowel and aggravating the disease. Warm-water enemata are useful, but can seldom be administered owing to the very peculiar irritable spasmodic condition in which the rectum usually is. In any case where this spasmodic condition is not present, or only to a slight degree, I have no doubt warm-water enemata, or, as I used in Case III, warm-water and air thrown in by a syringe would be useful. The ease, however, with which air is thrown into the spasmodically contracted rectum, when it is impossible even to introduce a teaspoonful of warm-water, gives this agent a pre-eminence over all others, and astonishes all who have seen it used. The remedy is always at hand even in the poorest cottage, no matter how far away from town. Its application is so simple as to require no direction for its use. The only necessity being that enough air be thrown into the bowel to distend it as far up as the neck of the invaginated portion, or, in other words, that the operation be continued until the child begins to be uneasy, and the belly distinctly tympanitic. Amongst other means for relief, cases are on record where the abdomen has been opened for the relief of the bowel in intussusception. It is difficult to reduce one by manipulation after death, and I have no doubt it would be much more so to do it during life.—*Lancet.*

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## ON THE CONDITION OF THE STOMACH AND INTESTINES IN SCARLATINA.

By Samuel Fenwick, M.D., late Lecturer on Pathological Anatomy at the Newcastle-on-Tyne College of Medicine.

The object of this paper is to prove the following propositions:

1st. That the mucous membrane of the œsophagus, stomach and intestines is inflamed in scarlatina.

2nd. That desquamation of the epithelium of these parts takes place.

3rd. That notwithstanding the anatomical changes in the mucous membrane of the stomach, the formation of pepsine is not prevented.

4th. That the condition of the skin is similar to the condition of the mucous membrane in scarlatina.

In support of the first proposition, the microscopic examinations of the mucous membranes of the œsophagus, stomach and intestines were detailed in ten cases of death from scarlatina during the first week of illness, and in six cases who died in the second and third week of the fever. The first effects of the scarlatinal poison upon the mucous membrane of the stomach were shown to be the congestion of the bloodvessels and the stripping of the epithelium from the tubes and the surface of the organ, and also the softening of the tissues. The tubes are greatly distended by granular and fatty matters, or by small cells intermixed with granules, and in some cases they are lined by a newly-formed membrane. Sometimes no normal cells can be distinguished; in other cases they are present, but are scattered irregularly. After the second or third week the tubes are found less distended than at an earlier period, and whilst their closed ends are still loaded with granular matters, which greatly obscure the gastric cells. These become more evident towards the surface of the mucous membrane. The cells at this period are sometimes very large, sometimes loaded with fat or coated with granules, and seem to have but little adhesion to their basement membrane, as they readily separate from the tubes, but adhere closely to each other. The effects of the inflammation upon the intestines seem, in slighter cases, to consist in the effusion of granular and fatty matters into the mucous membrane, but in more severe cases the tubes of Lieberkühn are obstructed by epithelial cells, whilst extravasations of blood take place in the villi, and these, with the rest of the mucuous membrane, are loaded with small cells and granules. In one case the mucous membrane was entirely stripped of villi, excepting a few fragments which still remained, and the enlarged and prominent openings of the follicles of Lieberkühn gave its surface the appearance of a sieve. In some instances in which the pancreas has been examined, evidences of disease presented themselves.

The second proposition was stated to be more difficult of proof, inasmuch as vomiting usually occurs only in the first stage, and the author had no opportunity of examining the vomited matters at this period of the disease. In one case, in which vomiting took place in the third week, fibrinous casts of the stomach tubes were discovered, and inflammation of the mucous membrane was proved to have existed by *post-mortem* examination. The chief reason upon which the opinion that desquamation of the epithelium occurs was founded, was from the microscopic examination of the stomachs of those who had died of this disease. The contents in recent cases consisted of pieces of fine membrane, of cells,

pathological action; and that the primary effect of the scarlatina poison is suddenly and violently to stimulate the natural cell-growth of the various secreting organs.

Dr. Wilson Fox said that he had listened with much pleasure to Dr. Fenwick's very able paper. It had possessed an especial interest for him, inasmuch as Dr. Fenwick's observations on scarlatina confirmed those which he had himself communicated to the Society in 1858, on the condition of the stomach in a variety of acute diseases, including variola, typhoid and puerperal fevers, pneumonia, peri- and endo-carditis, cholera, and many others, in which he had found the stomach in a condition very closely resembling that described by Dr. Fenwick, and which, after Prof. Virchow, he had designated as one of acute catarrh, the mucous membrane being hyperæmic, swollen, and cloudy-looking, and covered with very tenacious mucus. This condition he (Dr. Fox) had always found associated with a granular condition of the epithelial cells, which were shed with great facility both from the surface of the membrane and from the interior of the tubes; and were found in great numbers, and often enlarged and presenting multiple nuclei, in the tough mucous covering the surface. Since he had made these observations he had been in the habit of regarding the furred condition of the tongue in acute diseases as an index of the same irritative production of epithelium through the gastric intestinal track. He had also at the same time been able to point out, on anatomical grounds, that chronic affections of the stomach were frequently associated with chronic affections of other organs. On some points of detail Dr. Fox said that his observations differed from those of Dr. Fenwick. He (Dr. Fox) had not examined with the microscope the stomachs of patients dying from scarlatina, but the appearances which these presented to the naked eye corresponded so closely with those to which he had alluded that he spoke on them with more confidence than he should otherwise feel inclined to do. He still thought, as he had pointed out in his original paper, that the granular matter which Dr. Fenwick described as occurring free in the tubes, was really contained in the interior of epithelial cells, and that it was only in the severest cases of acute gastritis in which the cells became at once broken down, that the granular matter was found free. With regard to the casts of tubes described by Dr. Fenwick, he (Dr. Fox), not having examined the stomachs of scarlatina patients, could not make any positive observations, but he had never found any in the cases of other diseases which he had mentioned. He had, however, often observed appearances in the mucus having a most deceptive resemblance to casts, from the manner in which the epithelial cells were agglutinated by the tough mucus. He did not think

that these casts, if they did occur in the stomach, could be of a fibrinous nature, any more than the first epithelial desquamations from the kidney in the early stages of Bright's disease possessed that character; nor was he of opinion that the membrana limitans of the gland separated with the epithelium. He believed that when the membrana limitans (when it existed) was destroyed or injured, the power of reproducing epithelium was impaired or lost. Epithelium often separated in continuous masses from mucous surfaces and from the interior of glands. Such desquamation was not only exceedingly common under conditions of irritation, but was also, under some circumstances, a physiological act. It had been noted long ago by Mr. Goodsir, during digestion, and many recent observations on this subject were contained in Virchow's Archiv. He (Dr. Fox) was of opinion that Dr. Fenwick's observation, though very valuable as evidencing the participation of the stomach and intestines in the consequences of the scarlatina poison, did not show anything specific in that organ, or peculiar to the diseases in question.

Dr. Webster had listened with great gratification to the paper, especially as it confirmed what he had observed as to the employment of remedies in scarlet fever. It gave a great additional value to the minute researches of the author that they had a practical bearing in treatment. Dr. Webster then related instances in which the internal administration of irritating remedies, especially purgatives. did harm. He referred also to the bad effect of diet which was administered to some children in scarlet fever to tempt the appetite; and lastly, alluded to the good effects of sponging the skin with tepid vinegar and water.

Dr. Murchison said he had examined the stomach in twenty cases of scarlet fever, and found, on the whole, similar appearances to those described by the author; but he agreed with Dr. Fox that the granules were in the interior of the epithelial cells. He had not seen any casts. He thought, however, that the author had called attention to an important complication; but he (Dr. Murchison) could not agree that it was of universal occurrence, as he had examined the stomach in several cases of scarlet fever, and had found it quite healthy; and, on the other hand, he had found changes like those in scarlet fever in the stomach of those who had died of other diseases.

Dr. Fenwick said the question was one of experience, and continued examination would no doubt settle the question. In every case that he had examined during four years he had found the changes he had described. In some cases of scarlet fever the skin was not affected, and yet it was still called scarlet fever, and just so in a few the stomach might escape. Still we should in a large number find evidence of inflammation

of the stomach. The paper was chiefly to draw attention to the subject. In reply to Dr. Fox, he said that he had made the sections vertical with a double-bladed knife, and examined them with a low power and by help of a parabolic condenser. He had found casts best in children who had died a few days after the disease began; but in other cases he had not found them, and sometimes he had found only plugs, as described by Dr. Fox. These plugs, he had no doubt, were the result of inflammatory action.—*Proceedings of Royal Med. and Chirurg. Society*, in *London Lancet.*

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## Midwifery.

### SEA-TANGLE, (LAMINARIA DIGITATA)—ITS USE IN THE TREATMENT OF FLEXIONS OF THE UTERUS.

By M. S. Buttles, M.D., New York City.

The *Laminaria Digitata* was first brought before the notice of the profession by Dr. Sloan of Ayr, in the *Glasgow Medical Journal* for October, 1862. In the *Medical Times and Gazette* of November 28, 1863, is an article by Dr. J. G. Wilson, in which he calls attention to its value in dilating the urethra and os uteri. Mr. Critchett also mentions it in the treatment of stricture of the lachrymal duct, in an article, published in the *Lancet* of February 6, 1864.

It possesses many very important advantages; it can be worked up of any size and length; it is readily made smooth when dry, and is quite firm, yet elastic enough for all practicable purposes, so that it can be passed as readily as a silver probe. When exposed to moisture it expands to about four times its former size.

While making some experiments with this sea-weed I discovered that if a bougie made of it was bent while dry it would remain so until it was moistened, when it would gradually resume its former straightness; from this I conceived the idea of using it in the treatment of that frequent and hitherto obstinate displacement of the uterus known as flexion, whereupon I immediately gave it a trial, and the result thus far is of a satisfactory nature.

*Case*—Mrs. C———had been troubled for twelve years with dysmenorrhœa, arising from flexion of the cervix uteri. So severe were her pains at each menstrual period that she was obliged to take her bed. The ordinary treatment at the hands of several skillful practitioners had given her no relief.

August 20, 1864, three days previous to her expected menstrual flow,

I introduced a bougie made of the dried stem of the *Laminaria Digitata*, the size of a crow's quill, first warming it a little so as to make it flexible; this is best done by immersing in hot water, then bending it to the arc of a two-inch circle so as to enable me to pass it beyond the point of constriction, which was easily accomplished, and the bougie left *in situ* for twelve hours. When removed it was found to be perfectly straight, and three or four times its former size; there was not the slightest flexion of the cervix remaining.

The patient menstruated three days subsequent for the first time in her life without pain. The flexion partially returned, but the repetition of the treatment for the three succeeding months has entirely and I think permanently affected a cure. I have tried it in several similar cases with like good results, and hope the profession will take advantage of the above suggestions and give it a more thorough trial than I have been able to do. Several of our surgical instrument makers have sent to Europe for the Sea-Tangle, and will soon be able to supply those who may want it. —*Buffalo Medical and Surgical Journal.*

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## Medical Jurisprudence.

### CASE OF POISONING CAUSED BY CHEWING TOBACCO.

By Walter Scott, M.D., Edin., Clitheroe, Lancashire.

Richard Edmondson, aged 17 years, a piecer in a cotton-mill, was seen to leave home about half-past six on the night of Friday, October 28th, apparently quite well; he returned about half-past nine on the same night looking ill and pale. On being asked what was the matter, he said he was sick and had a pain in his stomach, after which he asked for some cold water, of which he drank, and then went to bed. In the interval between his leaving home and his return he had walked with a companion for a distance of half a mile, to a shop, and purchased half an ounce of Limerick roll tobacco, and an ounce of bird's eye tobacco. The evidence at the inquest subsequently showed that he had smoked two pipes of the bird's eye tobacco, and chewed about two-thirds of the Limerick roll tobacco. He was seen by one of the witnesses, about nine o'clock, leaning against a wall, and vomiting and trembling greatly; upon an inquiry as to the cause, deceased said *that he had been chewing tobacco, and had swallowed the spittle he should have spit;* on reaching home he complained of being stiff.

His mother saw him about six o'clock on the following morning (Satur-

day); he was then down stairs with his clothes on, having been assisted to dress by his brother, and appeared stupified and drowsy. He was sitting on a chair apparently asleep, and his mother awoke him, gave him some senna and cream of tartar, and helped him to go to bed again. All that he had eaten on the previous night was an apple, and during the whole of Saturday he had nothing except a little cold water and some tea. About one o'clock his limbs began to be very stiff; the drowsiness continued to some extent, but not so much as before. The patient continued in bed all day, and complained of his limbs aching; about three o'clock on Sunday morning he was seized with convulsions. I was sent for early on Sunday morning, when I saw him for the first time. He was then perfectly unconscious, the features were sunken, the lips were drawn back, showing the teeth, which were covered with dark sordes, the tongue was dry, parched, and covered with a blackish brown crust, the pupils were fully dilated and quite insensible to the light of a candle held close to the eyes; there was no pulse at the wrist, the sounds of the heart were inaudible, and its movements could scarcely be felt. The patient moaned frequently, was restless, and placed his hand to the pit of his stomach, frequently drawing up his legs, as if he suffered great pain in the abdomen; the head was firmly drawn back, with rigidity of the muscles of the posterior part of the neck. I saw him frequently until his death, which took place on the following Friday afternoon, nearly a whole week from the time when he chewed the tobacco. No important change took place from the date of my first being called to see him. He never became conscious; the pulse improved but remained feeble and thrilling. The pupils were somewhat less dilated, but remained inactive. At times great difficulty of swallowing was present, and there were constantly returning rigid tetanic spasms, the muscles of the back being principally affected.

The treatment consisted in the administration of stimulants, such as brandy, strong coffee, and sesquicarbonate of ammonia, and the application of sinapisms over the regions of the heart and stomach. So completely was the patient under the narcotic influence of the tobacco, that I feel certain he would have died on the Sunday afternoon if I had not succeeded, to some extent, in restoring the heart's action.

The chief post-mortem appearances, forty-eight hours after death, were the following:—The body was rigid and emaciated; there were early signs of decomposition over the upper part of the chest and the lower part of the abdomen, and blueness of the nails. These two latter appearances were noticed by the man who laid out the body, within a quarter of an hour after death. On opening the stomach, I found it to contain about an ounce or more of dark grumous matter, free from any particular

odor. The mucous membrane of the cardiac orifice and large end of the stomach were highly congested and inflamed, with red patches of inflammation along the larger curvature, and at the pylorus. No effusion of blood, ulceration, nor perforation were found in the intestines. The spleen was considerably enlarged, the kidneys appeared of a normal size and healthy, but were not removed from the body.

The lungs were congested, but otherwise healthy. The heart was large, pale, and flabby, and the right auricle was nearly full of very black liquid blood. On opening the head the blood-vessels of the brain were found to be everywhere very greatly enlarged and distended with dark blood; about half an ounce of extravasated blood was found between the hemispheres; there were no adhesions between the membranes of the brain, nor serous effusion in the ventricles.—*Medical Circular.*

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## POISONING BY DUST OF LEAD.

On Thursday week an inquest was held by Mr. Herford, city coroner, on the body of a young woman, twenty-five years old, named Bridget Connor. The deceased lived in Garratt-street, Oldham-road, and worked as a winder at the mill of Messrs. Armitage and Rigby, bedtick manufacturers, Rodney-street. She had lately complained of pains in the stomach and head, and had lost her appetite. On the 29th ult., the deceased having been away from her employment a week medical assistance was obtained. Dr. Royle said that he observed a blue mark round the deceased woman's gums and teeth, indicating that lead in some form had been absorbed. He had made a post-mortem examination, and had found the brain slightly congested, and the windpipe, bronchial tubes, the inner lining of the stomach, and the first part of the small and large intestines in a state of irritation. The large intestine, which ought to have been three times the size of the small one, had been contracted to a much less size than it. All these appearances indicated poisoning by lead, which might have been taken in through the skin, or inhaled in the form of dust. Mr. William Armitage (of Messrs. Armitage and Rigby) said that some time since the firm was working hanks of an orange-colored dye, which could not be made fast unless it contained sugar of lead. As soon as they discovered its deleterious nature, they worked off all the hanks of that dye that they had, and discontinued the use of it. The winders often objected to having the windows open. Messrs. Armitage and Co.'s foreman corroborated the evidence of the last witness, and said there had been two or three other girls ill. The jury returned a verdict that the deceased died from lead poison.—*Manchester Guardian.*

Canada Medical Journal.

MONTREAL, FEBRUARY, 1865.

## THE RECENT CASE OF ACCIDENTAL POISONING AT QUEBEC.

The somewhat frequent occurrence of cases of poisoning through the mistakes of druggists' assistants both in our own country and in Great Britain, has drawn the attention, not only of the profession, but of the public to the matter, and the question now anxiously enquired is, what can be done to remedy this apparently increasing carelessness, where there should be ever-increasing caution. We had intended in a previous number to have referred to this matter, but were waiting to notice what action the Pharmaceutic Societies of Great Britain would take. The occurrence of the case in Quebec, in the last week in December, calls upon us to delay no longer, especially as Parliament is now in session. The facts of this melancholy case are, in brief, as follows: The day after attending a party three young men entered the drug store of Sturton & Co., and requested the person in charge—who, it appears, was a son of Mr. Sturton—to prepare them a tonic. He prepared for them, as he believed, a draught, consisting of compound tincture of gentian, cardamoms, and cinchona, with a few drops of aromatic spirits of ammonia, and essence of ginger, after taking which they left. They had not proceeded far when they were seized with faintness and great depression of the vital powers. They separated, two going towards Russell's Hotel, where they partook of some brandy; the third wended his way to the office of the Board of Works, where the depression became so great that, being alarmed, he took a sleigh and drove to Russell's Hotel. Convinced that they had been poisoned, medical assistance was summoned, and all was done that science and skill could suggest; fortunately with success in two instances, but without avail in the third. At the inquest, which was held, the medical men believed that tincture of digitalis had been put into the tonic by mistake, and to the extent of half an ounce. Dr. Marsden was especially positive as to its being digitalis, and gave his reasons most clearly; he had taken much pains to examine the condition and position of the bottles in the drug store immediately after the discovery of the mistake.

The question was asked by a juror if the tincture of digitalis was not sometimes given by medical men in large doses, say half an ounce, to which the medical witness replied to the following effect: "It is given, but I consider the practice a bad one; and medical men have been condemned for so doing." Surely our medical friend will not say that the greatest benefit has not resulted from the employment of half ounce doses of the tincture of digitalis in delirium tremens when the proper cases and subjects for its administration are selected. We have employed it frequently —seen it used frequently—with the most marked beneficial effects. The records of medical periodicals speak as to its great use in this disease. Our own journal of last month contained a brief but interesting case of this disease from Mr. Hunt, Assistant Surgeon of the 4th Battalion, Prince Consort's Own Rifle Brigade, stationed in this city, which we think no one will deny would have terminated fatally but for the judicious employment of the tincture of digitalis in half ounce doses. From this digression let us return. The evidence of the two survivors showed that the unfortunate dispenser was bothered and teased while preparing the draught—and thus he excuses his mistake—this is no excuse, only a palliating circumstance in the case. The jury returned a verdict of manslaughter against young Mr. Sturton, who was admitted to bail. We cannot imagine that any great punishment will be awarded this unfortunate young man, who seems to feel most deeply his sad position, for though a very careless mistake, it is one ever likely to occur so long as the present condition of things is allowed to continue. What then are the causes of these constantly recurring fatal mistakes, and what means ought to be taken to prevent them? With regard to the first we answer, there are several causes, principal among which is the employment of incompetent assistants. A young man wishing to become a chemist and druggist is apprenticed for a certain number of years, five we believe, to one in the business, and in the majority of instances, in this province at least, as soon as he becomes acquainted with the names of the different drugs, is allowed at once to become a dispenser. This we consider a great error, and it is our conviction that no apprentice should be allowed to make up a prescription unless under the very eye and guidance of a regularly qualified assistant, till he, by examination, show that he has a theoretical as well as a practical acquaintance with his business, and has regularly fulfilled his apprenticeship: every prescription should also be checked before leaving the shop by a second party. The latter is done, we are aware, in at least one shop in this city—perhaps in more—but we know it is not universal. Why are so many incompetent assistants found in our drug stores? perhaps our readers ask. We answer simply

because the salary paid to a first class assistant—one who has regularly served his time—in the majority of drug stores, is so wretchedly small, seldom exceeding £130, often not £100, that no one will remain, but, as soon as his apprenticeship is out, removes to the neighboring republic, or, in despair of ever becoming comfortably well off, abandons the business altogether. Now that the majority of our leading physicians are giving up the dispensing of their own drugs, and giving prescriptions, let those stores, who intend to do a prescription business, get good qualified assistants to superintend that department; *pay them well*, and one step towards doing away with these oft recurring mistakes will be accomplished. Though we have, in answering our first question, also, to a certain extent, done the same to the second, yet there are means which our legislature can use which we think would almost to a certainty prevent the recurrence of such lamentable accidents. At present, in all drug stores, the poisonous drugs, as tinctures of aconite and digitalis, are kept among other substances on the shelves, there being nothing to distinguish one from the other save the name on the bottles. It has been suggested in England to have the outside of bottles containing poisons, sanded, and their stopper made a peculiar shape, so that the moment the bottle was touched, the party would know he touched a bottle containing poison; or, if that escaped him, removing the stopper would again remind him. This is very good, but does not seem to us so likely to accomplish the end in view as what we are about to propose, though it might be included in it as an additional safeguard. We would suggest that every article of a poisonous nature should be kept in a case with glass doors which should be always locked, the key hanging at a known spot with a piece of brass attached having stamped on it—*poison case.* If such was rendered imperative, taking the key, opening the locked case, touching the bottles, opening the bottles,—all would remind the person he was handling poisonous substances. If some such plan as this was adopted we feel confident that it would, if not entirely, almost, remove the possibility of an error occurring. It is idle to allow the present state of things to continue, for the public do not feel secure, and are loudly calling upon their parliamentary representatives to take action in the matter. We hope that this session of Parliament will not terminate without some legislation on this subject.

Since the above was written, the case has been brought before the Grand Jury at Quebec, who have thrown out the bill against young Mr. Sturton.

## QUEBEC MARINE HOSPITAL.

The Annual Return of the patients in the Marine Hospital for the year ending 31st of Dec. last, has been published. The number who were inmates of the Hospital during the period named is 1,435. Of these, 752 were Protestants, 680 Catholics, and three Infidels. Of the gross total, 106 were emigrants, 607 were citizens and strangers, and 722 were seamen. This does not include ninety paying patients, who were received into the Hospital, and were the recipients of its benefits. But the most agreeable fact in this amount of disease and suffering, is that the percentage of deaths was only $2\frac{3}{1}\frac{}{0}$ths. The number of days the patients were in hospital is 32,994. The number suffering from acute disease, 1,254, who were treated during 25,220 days, giving an average of somewhat over twenty days to each patient. Those treated for chronic diseases were 182, who passed a total of 7,765 days in hospital, or an average to each of less than forty-three days. We find that 106 emigrants entered the hospital. This is a very small number compared with the total of those who reached Quebec, and confirms the truth of the official statement that the health of the emigrants last season was good.

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## THE USE OF TECHNICAL TERMS.

There are in our opinion certain times and certain places, where the employment of the various technical terms, which are used in the science and art of medicine, are not only uncalled for, but decidedly wrong, or at all events if made use of, should be followed by full and plain explanations. Such places we believe are courts of justice, and before a coroners' jury; and we know in our own city more than one of our medical men who owe not a little of the success which has attended them in securing good practices, to the plain, simple and common sense way in which they, when criminal cases came on for trial, gave their account of the condition of the parts, observed at the *post mortem* examination. The medical evidence is for the benefit of the jury—men generally who know as little where the *Sphenoid bone*, the *Dura-Mater*, *Pia-Mater* and *Arachnoid* are; men who know not what an *ecchymosis* is, more than does a child of half a dozen of years. The result is, what was intended for their information and guidance becomes to them entirely worthless, or serves only to increase their bewilderment, already bad enough, from the legal mist wove around it by the prisoner's counsel. We are led to make these few observations from noticing that at two coroners' inquests lately held, the evidence of the medical men who made the *post mortem*, was given in language so purely technical as only to be understood by the profession. As

we before said, we consider this decidedly wrong. In future let the profession, on occasions like the above, eschew words and terms, which, though as familiar to them as household words, are but Greek to more than three-fourths who listen to them.

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## COLLEGE OF PHYSICIANS AND SURGEONS FOR LOWER CANADA.

At the semi-annual meeting of the Board of Governors of the College of Physicians and Surgeons of Lower Canada, held at the Laval University, Quebec, on the 11th of October last, the following amendments to the Rules and Regulations of the College were unanimously approved, and will be submitted for adoption at the triennial meeting of the College, to be held in the town of Three Rivers, on the second Wednesday of July next, according to law.

### REGISTRAR AND TREASURER.

The first section under the following heading shall be amended by substituting the following in lieu thereof:

1. The Registrar shall keep in his possession the books of enregistration, one of which shall be for students entering upon the study of medicine or pharmacy, and the other for the members of the College, licentiates, midwives, apothecaries, and all other persons practising medicine or pharmacy in Lower Canada, and he shall have charge of the seal of the College.

The third section shall be amended by substituting the following:

3. The registrar shall receive as remuneration the sum of twelve pounds ten shillings currency annually, out of the contingent fund.

### OF LICENTIATES.

The following shall form the fourth section of the Rules and Regulations under the heading "Of Licentiates."

4. Every person now practising medicine, surgery, midwifery or pharmacy, or who may hereafter practice in Lower Canada, shall enregister his or her name, age, place of residence, nativity, the date of his or her license, and the place where he or she obtained it, in the books of the College, within three months after the publication of this By-law.

### REGULATIONS, ETC.

The following shall be substituted for the second section of the Regulations, and be in lieu thereof:

2. Candidates for Provincial license to practice either medicine, surgery, and midwifery or pharmacy, will be required to submit to a literary

and classical examination on entering upon their studies, and a professional one, at the close.

The following shall form the eighth section under the above heading; the present eighth and ninth sections of the same to form respectively the ninth and tenth sections:

8. The candidate for pharmacy must also furnish proof that he has attended lectures on the following branches, at some University, College, or incorporated school of medicine, or pharmacy, within Her Majesty's dominions:

Chemistry, materia medica and pharmacy, two six months' courses of each.

Toxicology and botany, one three months' course of each.

It was moved by Dr. Sewell, and seconded by Dr. Gilbert, and resolved, That the proposed amendments to the by-laws now read, be published in the *Canada Medical Journal* of Montreal.

A true copy of the minutes.

W. MARSDEN, M.D., President.
Col. Phys. & Surgs. L. Canada.
R. H. RUSSELL, M.D.E., } Secretaries.
H. PELTIER, M.D.E. }

Quebec, 12th October, 1864.

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The semi-annual meeting of the Board of Governors of the College of Physicians and Surgeons of Lower Canada, was held, this day, in the Laval University. Present:—Drs., Marsden, Von Iffland, Landry, Sewell, Smith, Weilbrenner, Robitaille, Boyer, Gilbert, Marmette, Munro, Jackson, Boudreau, Jones, Blanchet, Robillard, Scott, Howard, Fenwick, Brigham, Tassé, Pelletier, Michaud, Tessier, Cheverfils, and Russell. Dr. Marsden, President, in the chair. Minutes of the last meeting were read. Letters of apology for absence, were read from Drs. Foster, Turcotte, and Hamilton.

Moved by Dr. Howard, seconded by Dr. Von Iffland, and resolved "That the minutes of the 10th of May, 1864, be amended by the insertion of the names of the persons whom the Secretary of Montreal was authorized to prosecute in the name of the College."

Moved by Dr. Sewell, seconded by Dr. Fenwick, "That the minutes of the last meeting be adopted."

Proposed amendments to the by-laws were submitted by Dr. Marsden, and were referred for further consideration to the committee appointed at the last meeting, who were ordered to report before the adjournment of this meeting. Dr. Peltier read the report of the committee appointed

to take legal advice on the matter of the Medical Relief Fund of the College of Physicians and Surgeons of Lower Canada.

Moved by Dr Howard, seconded by Dr. Peltier, and resolved, "That the report now read be received and adopted, and that the further considerations of the subject be deferred until the next semi-annual meeting, and that the legal opinion obtained on the subject be filed amongst the records of the College.

Moved by Dr. Gilbert, seconded by Dr. Robillard, and resolved, "That the codification of the by-laws submitted by Dr. Marsden, be immediately referred to the committee appointed at the last meeting for the purpose of codifying the by-laws, or as many of them as are now present, and that they be requested to make their reports to-day.

Dr. Howard read the report from the committee appointed to enquire into the question of forming a class of Fellows of the College of Physicians and Surgeons of Lower Canada, which was adjourned from the last till the present meeting.

The report, upon request, was translated by Dr. Peltier, which being amended, it was moved by Dr. Tassé, seconded by Dr. Landry, that the report now read by Dr. Howard be printed, as amended, be sent to each of the Governors of the College, and that notice of its object be published, as required by the by-laws, in order that it may be submitted for discussion at the next triennial meeting.

The following gentlemen were proposed for membership, ballotted for, and admitted; Drs. George Goldstone, Francis W. Campbell, Wm. Hamilton Taylor, Duncan McCallum, Robert Craik, and J. J. Ross.

Moved by Dr. Weilbrenner, seconded by Dr. Munro, "That the Treasurer be ordered to pay the travelling expenses of the Governors now present, as formerly, till the next triennial meeting. The President declared the motion out of order, and refused to let it go to the meeting, as he did not feel justified in signing for these amounts which were provided for by a by-law, from a special fund, accruing from candidates' license alone. That the committee appointed at the last meeting, "to prepare a statement of the funds of the College, separating the money derived from candidates' licenses for medicine and for pharmacy, from those derived from other sources," had not reported. After stating these reasons, Dr. Marsden left the chair, and Dr. Von Iffland, the Vice-President for the District of Quebec, was called to preside; when, the Treasurer being asked, stated, "that the funds in his hands were ample for the purpose."

The motion was then put to the meeting, and passed, "That Drs. Sewell and Blanchet be paid their travelling expenses, for the last meeting, held in Montreal, in May last."

Dr. Marsden strenuously opposed this motion also, and in addition to his reasons already mentioned, declared it to be a violation of the by-law which enacts that "no Governor shall be entitled to travelling expenses unless he shall have faithfully attended to the business of the meeting until it shall have been duly closed."

The motion was then put and passed on a division, Dr. Marsden insisting upon the yeas and nays being recorded.

For the motion: Drs. Fenwick, Weilbrenner, Howard, Scott, Boyer, Brigham, Tassé, Munro, Jones, Peltier, and Mechaud (11).

Against the motion.—Drs. Boudreau, Smith, Marmette, Gilbert, Marsden, Landry, Tessier, Jackson, and Russell (9), Drs. Sewell, Blanchet and Robillard, not voting. The latter, having been absent during the discussion, asked leave not to vote, which was granted.

The committee appointed to codify and prepare amendments to the by-laws, retired to another room to prosecute their task, and to prepare a report to be submitted at the present meeting.

The examinations were now proceeded with. Dr. Frederick Montizambert presented his degree from the University of Edinburgh, and a diploma from the Royal College of Surgeons of Edinburgh, took the oath, as required, and received his license.

The following candidates were examined, and received the license to practice:

Messrs. Joseph Côté, Edouard Desjardin, Isidore Ethier and Luc Beauchène.

Several candidates being unable to satisfy the board as to their fitness to practise, were, after examination, refused the license.

Messrs. Thomas Vallerand and John Veldon were examined, and received their license to practice pharmacy.

Messrs. G. Antoine Larue, James Pelletier, William Bald, Michael Ahern, Josue Henri Martin, C. A. C. Lacombe, Donald Fraser, Frederick Henri Rinfret and John W. E. Holwell, were admitted to the study of medicine.

The examinations being gone through, the Board next continued with the business of the College, Dr. Marsden, presiding.

Dr. Marmette proposed, seconded by Dr. Boudreau, "That Dr. Lavoie be elected in the place of Dr. Charest, as a Governor of the College for the District of Quebec."

Dr. Marmette alleged that Dr. Charest had forfeited his position as a Governor of the College, that he had absented himself from the regular meetings of the Board twice consecutively, without assigning any cause

to the Board, in consequence of which his seat should be considered vacated.

The President declared that he had received from Dr. Charest, in October last, an official letter, begging to be excused by the Board for his absence from the meeting; that he, Dr. Marsden, read the letter to the meeting, and it was accepted as satisfactory. Dr. Marmette insisted that as no record appeared in the minutes, of such excuse, that his motion must prevail.

The President declared the motion to be out of order; and his decision was maintained, on appeal to the meeting.

The Report of the Committee appointed to codify the by-laws and to prepare amendments thereto, was now laid before the meeting, and the Secretary was requested to read the proposed amendments.

Moved by Dr. Sewell, seconded by Dr. Gilbert, "That the proposed amendments to the by-laws, now read, be published in the *Medical Journal* of Montreal."

It being now 6 o'clock, p.m. and the Board having been in session from 10 o'clock, a.m., without intermission, and no other busines, remaining to be transacted, the President ordered the names of the Governors present at the time of the adjournment to be entered on the minutes. The following were present: Drs. Marsden, Von Iffland, Sewell. Tessier, Marmette, Michaud, Gilbert, Russell (9).

The meeting was then adjourned.

R. H. Russell, M.D.E.,
Secretary for the District of Quebec.

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## MEDICAL NEWS.

The attendance of students at the University of McGill College this Session is in excess of any previous year, notwithstanding the absence of a number who, last year, passed their primary examination, and are now serving in the Northern Federal army as Assistant Surgeons. The number of matriculated students is 179.

The formal induction of Professor Bell to the chair of chemistry, and of Professor McLean to that of the Institute of Medicine in Queen's College, Kingston, took place on the 10th of January, in the presence of Rev. Mr. Snodgrass the Principal, the Governors, Trustees, and the *élite* of the city. We congratulate them both, upon the honorable position they have been called upon to fill thus early in their professional career.

The number of students in attendance at the French Canadian school of Medicine and Surgery of this city is 69.

The Annual dinner of the students from the British North American Colonies attending the Universities of Edinburgh and Glasgow, took place in Edinburgh on the 24th of December last. These annual reunions take place alternately in the two cities named—the students of each being alternately the guests of the other. They are of an exceedingly pleasant character, as we can testify from personal experience, having been present at the one held in Glasgow in 1860. The feeling among the students seemed to be unanimously in favor of Confederation.—The annual death rate of the city of New York is 1 in 45.—Typhus fever is raging both in Glasgow and Greenock, Scotland. In the latter city, two physicians have, within a few weeks of each other, fallen victims to it, both being young men not over thirty years of age. Dr. Rowand has been appointed by government, port physician at Quebec; the salary is £300 a year. He has resigned his office of Visiting physician to the Marine Hospital.—The area to be covered by the new Hotel Dieu Hospital in Paris is 22,000 square yards.—The sum of £7,000 sterling has been raised at a Bazaar for the Convalescent Hospital to be erected in Glasgow.

The British Medical Journal says that the black troops in Ceylon have a much lesser mortality, than the white; but in the West Indies it is the reverse. In Jamaica, the death rate among the black troops was 30·25 per 1000 mean strength; among the white troops only 12·81. M. O. Flaherty, the principal medical officer in command, says black troops are to appearance strong, but when sick, nature seem to have little power to resist disease. They are only allowed two meals a day, one at 8 a.m., and at noon, leaving them twenty hours without food; but the medical officers have recommended the addition of an evening meal.

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DEATH.—We regret to have to chronicle the death of John Lawson Stevenson, M.D., of London, C. W. He expired at his father's residence on the 4th January, from scarlet fever. Dr. Stevenson was a graduate of McGill University, session 1855, and was only 31 years of age.

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*Errata.*—Page 313, line 19, for humid read tumid; line 25, for Mistura Camphora, read Misturæ Camphoræ; line 26, for Aqua distillato, read Aquæ distillatæ, page 314, line 6, for ol. Tiglii ℥ ij. read ol. Tiglii ♏ ij; line 13, for transpired on November 4th; read transpired; on November 4th, &c.; page 315, line 26, for Grey's Hospital reports read Guy's Hospital reports.

# CANADA
# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Observations on Insanity.* By JOSEPH WORKMAN, M.D., Medical Superintendent Provincial Lunatic Asylum, Toronto, C. W.

The Provincial Lunatic Asylum at Toronto was first opened in January, 1841, in the old gaol in the centre of the town, directly in front of the present post-office. This building was soon densely filled, and it became necessary to procure further accommodation for the numerous applicants for admission,—a fact realized in all countries on the institution of asylums for the insane.

The eastern wing of the parliament buildings was appropriated to this purpose, and subsequently a still further addition was made by the occupation of a vacant house near the old garrison. The three buildings were used until the present asylum, nearly three miles west of the centre of the town, was ready for occupation. On the 26th January, 1850, the patients of the three temporary institutions, 211 in number, were transferred to the new building.

The total admissions up to this time had been 889, of which 536 were men, and 353 women.

The disparity in the numbers of the two sexes here apparent, deserves attention. It arose, not from a preponderance of insanity in males, but from the fact that up to this time, women becoming insane were not sent to the asylum so generally as men. They were less dangerous and more easily managed at home. The difference between men and women admitted was 183, as will be seen by the figures. At the present time, fifteen years later, the difference is 178; consequently the incidence of insanity in the two sexes, so far as we can judge from the admissions into the asylum, has been almost equal. In this period the admissions of men have been 1110, and of women 1115, and the total of men in the whole twenty-four years has been 1646, and of women 1468, making an aggregate of 3114.

The disposal of the above 3114 patients has been as follows:

| | Men. | Women. | Total. |
|---|---|---|---|
| Discharged | 911 | 745 | 1656 |
| Died | 329 | 285 | 614 |
| Eloped | 29 | 9 | 38 |
| Total | 1269 | 1039 | 2308 |
| 1st Oct., 1861. Written off to Malden | 108 | 91 | 199 |
| 1st Jan., 1864. " to Orillia. | 49 | 76 | 125 |
| 11th May, " Further transfers to Orillia | 4 | 6 | 10 |
| 1st Jan., 1865. Remain in chief asylum | 211 | 185 | 396 |
| " " in U. Branch | 5 | 71 | 76 |
| Total remain | 377 | 429 | 806 |
| Total admitted | 1646 | 1468 | 3114 |

It will be observed that of the total male patients admitted, say 1646, there remain 377, or nearly 23 per cent.; but of the female patients, 1468, there remain 429, or 29½ per cent. This difference is not to be accounted for by a lower aggregate of mortality in the female patients. The total deaths of males have been equal to nearly 20 per cent., and of females 19 4/10 per cent.; and this slight difference in favor of females may soon disappear. It was greater at the commencement of 1864, and has been brought down by a preponderance of female deaths in this year;—say 25 females against 10 male deaths.

I apprehend that the true solution of this problem is to be found in the fact, that a much larger proportion of females have been admitted in the chronic stage of insanity than of males. This fact still obtains, and is not, I believe, peculiar to our asylum. The disparity in male and female admissions in the early years of the institution, has been pointed out; and the near equality of them in subsequent years has been shown. But though there is good reason to believe that the incidence of insanity in the sexes is equal, the early preponderance in male admissions has not been obliterated.

In the last ten years the admissions of males have amounted to 728, and of females to 761. The discharges of males in this period (not including elopements) have been 358, or equal to 49⅙ per cent., on the admissions; and the discharges of females have been 356, or 46 4/10 on admissions; thus still showing that, although women have been more numerously admitted of late years, their rate of recovery is still lower than that of men. Unless we had *reliable* information of the previous duration of the insanity in both, it would be impossible to give an absolute

decision as to the relation between the chronicity of female cases and their rate of curability. Nothing, however, can be less reliable than the statements on this head, furnished in a large proportion of the certificates of insanity sent in with the patients. Of the general fact, however, of longer duration of insanity, before admission, in females than in males, I have no doubt. It is a most serious consideration, alike to the friends of the insane and to the public which has to support for life, all those who do not recover; and it is as obviously the duty of the latter to *provide* early treatment, as it is the interest of both that it be early *availed* of. Indeed it cannot be questioned that the best interests of humanity would be promoted, not merely by providing the means of early treatment, but by enforcing on the friends of the insane recourse to it. No fact in connection with insanity has been more certainly established than the relation between recovery and early submission to asylum treatment. About 75 per cent. of all recoveries are found to take place in patients whose insanity has not, before admission, exceeded three months; whilst not more than 10 per cent. of all recoveries are furnished by those whose insanity had exceeded one year before admission. It is, however, by no means to be asserted that all who are brought under treatment within three months from the invasion of insanity recover, as, from a perusal of some loosely written asylum reports, we might be led to believe. Every intelligent asylum physician knows that this is not the fact, and every discreet and candid one will admonish the friends of the insane against depending on it. We may admit, within the first week from manifestation of insanity, patients as certainly incurable as others whose malady has been of years' duration. This holds true, especially in cases of general paralysis, and in a very large proportion, if not all, of those affected with tubercular or scrofulous disease. It is in the *post-mortem* theatre that we most clearly learn the long underlying causes of incurability of insanity.

The investigation of the causes of insanity seems to be a subject of general interest. Like many other enquiries, however, into obscure matters, it is always more sanguinely proceeded with, by those who have some cherished foregone conclusions to ratify, than by those who desire merely to arrive at truth; and it is invariably found that those who know least of the subject, believe most implicitly in the correctness of their own views, and are infinitely more dogmatical than those who have had a large field of observation, and have for years assiduously worked in it. The candid confession of all asylum physicians of long and large experience, would most probably be that they know much less on the question of the causes of insanity than they once believed they did. In a large

proportion of cases of insanity, sent to asylums, no exciting cause is assigned; and in a very large proportion of those in which the exciting cause is assigned, the only true relation existing between it and the malady, is that of mere coincidence, or indeed it may be that the assigned cause has been rather an effect of the insanity or one of its capacious epiphenomena. Statistic tabulation of such fallacies must be not merely useless but most deceptive. In the last annual report of one of the best insane hospitals in America, and one of the best in the world, in a total of 4323 cases admitted, no cause was ascertained in 1766, or nearly 41 per cent. of the whole; whilst of the remainder, 727 are ascribed to "ill-health of various kinds;" 286 to "intemperance;" 227 to "grief, loss of friends, &c.;" 146 to "religious excitement;" 278 to "mental anxiety;" 149 to "loss of property;" 94 to domestic difficulties," and 35 to "intense application to business." Now it is very questionable whether in all these cases, amounting to 1942, or 45 per cent. of the whole, not excepting "ill-health of various kinds," nor even "intemperance," the assigned *cause* was not in reality, an effect of the so-called mental *disease*. Of the 146 ascribed to "religious excitement," probably in 140 the religious excitement germinated in latent insanity. The 94 ascribed to domestic difficulties may be regarded in a similar light. Grief, loss of friends, &c., are no doubt severe mental trials; but sound minds survive them. I have never yet met with a case which I could fairly assign to any of this class of causes, as a sole efficient agency in its production. The designation of "mental anxiety," as the cause of insanity has the aspect of a psychological solecism. To my apprehension it is about as philosophic as the ascription of loss of sight to blindness, or baldness of the head to loss of hair. Scrutinize the 278 cases ascribed to this cause, and see in how many of them the "mental anxiety" was not the veritable insanity. So to with regard to the 35 cases assigned to "intense application to business,"—who that has ever watched one of these, not indeed from the time at which the mental disease burst into full blow, in the form of furious mania, or profound melancholy, but for months and years antecedent, will affirm that the "intense application to business" was other than incubative insanity?

Now if, in the tabulation of causes of insanity, in the very best institutions of America, or Europe, by the most competent and conscientious chief officers, we find that in 40 per cent. of all the cases, no cause has been assigned or ascertained, and that in 45 per cent. more, very little reliance is to be placed in the assigned causes, of what real value to mental therapeutics can the whole work be? But the above 45 per cent. might have

been raised to over 50 per cent. by including a few others, well deserving of the association, as dread of poverty, disappointed expectations, mortified pride, uncontrolled passion, tight lacing, &c., &c.

Had the table been restricted to the following heads, it might have deserved respect, viz.:

| | |
|---|---|
| Puerperal state,..... | 169 |
| Injuries of the head, ..... | 54 |
| Masturbation,..... | 60 |
| Exposure to cold,..... | 4 |
| Exposure to the sun, ..... | 38 |
| Total,..... | 325 |

Here are 325 cases in 4323, perhaps fairly accounted for, whilst 4000, less two, are worse than unaccounted for. But do we not all know, and has it not always been well known, that the "puerperal state," in a certain small proportion of women, leads to insanity, and can our tabulation of the cases, in any way tend to avert the evil, or improve our treatment of it? The table assigns sixty cases, all of males, to masturbation.—Had the number been 600, it would probably have been nearer the true mark; if not in relation to the course of insanity, at least in relation to concomitance with it. Here we confront an evil of horrific magnitude. It is attaining fatal proportions over the entire length and breadth of this continent. The medical profession, alone, have an approximate conception of its extent. Fully one-third, if not a half of all the male lunatics, and it is to be feared an increasing small per centage of those of the other sex, entering our asylums, are addicted to the vice. It seems legitimate enough to include it in our table of causes; and yet may we not hesitate, under strict medical logic, to admit it as the *cause* of insanity in every case in which it obtains? We do not admit even intemperance, as the cause in all cases in which it has been present. When we reflect on the very large number of persons, who are undoubtedly embraced under these two heads, and consider how small is the proportion of them becoming insane, does it not comport with sound medical philosophy, that we stop not short in our enquiry, satisfied that we have possessed ourselves of the whole truth, the moment we learn that either of the two destructive habits has been indulged in? Predisposition to insanity is undoubtedly frequently linked with predisposition to the abuse of stimulants; and I believe that even in countries most addicted to intemperance, the opinion of experienced psychiatrists is less distinct than it was some years ago, on the question of the causal relation of intemperance to insanity. If intemperance were *per se*, an

efficient cause of insanity, surely the number of the insane would be enormous. In like manner, if masturbation be regarded *per se*, as an efficient cause, I dread to think how multitudinous will be the number of lunatics in America; and considering how very hopeless are the large majority of those cases in asylums, in which it is present, I tremble in contemplating the future augmentation of incurables. I would therefore gladly be persuaded, that the vice, as we encounter it in large insane institutions, has been to some extent resultive, rather than causal; and that persistence in it is a consequence of the dethronement of reason, and consequent loss of moral self-control, rather than the converse.

The consideration of insanity in this country, in relation to the important facts,—civil state, age, nationality and religion, may not be uninteresting to a majority of medical readers. In these aspects of the disease, as in others, an extended survey of facts may serve to correct erroneous impressions, or to lead us to greater cautiousness of generalization; and as the figures herein presented are derived from a rather extended period of registration, they may be accepted with some degree of reliability.

The civil state of 3114 patients admitted in twenty-four years has been as follows:—

| | |
|---|---|
| Married (and widowed) men, | 731 |
| Do. do women, | 950 |
| Single men, | 915 |
| Do. women, | 518 |
| | 3114 |

It must be obvious to every intelligent reader, that the above figures in themselves, are not the exponents of the relative liability to insanity of the married and single, in either men or women. We must take them in comparison with the actual numbers of the several heads, in our population, within the periods of age subject, or *most* subject to insanity.

The period of age furnishing the largest proportion of insanity, in Upper Canada, is that from 30 to 40 years; the period from 20 to 30, though in absolute numbers, not falling much short of that from 30 to 40; yet, as it is represented by larger figures in the causes, its proportion is much less. The actual proportional excess of the latter over the former is between 80 and 90 per cent.

The census of 1861 shews that within the ages 30 to 40, the several numbers of married and single men and women were as follows:—

| | |
|---|---|
| Married men..... 113.653. | Do. women.....133.544. |
| Single men.....144.011. | Do. women..... 58.254. |

The large excess of insane single men (915) over insane single women (518), when taken in comparison with the respective numbers in the census, not merely disappears, but we find the relative excess is on the side of single women. Their equal proportionate number would be 368 instead of 518.

The married women are in proportional excess of married men; their figure, in equal proportion, would be 860, instead of 950.

The proportional number of single men, as compared with married men, would be 931, instead of 915.

It is, of course, very difficult, if not impossible, to institute any process of calculation, by means of which the exact fair proportions may be evolved. I have assumed as my numerical standard of comparison, that decennial period which furnishes the largest actual, as well as the largest proportional, number of insane. The results thus obtained must be regarded as only approximative. It is probable that a more accurate or extended calculation, would go to shew that the civil state of patients has less to do with insanity than has been supposed. At all events, for the sake of that excellent division of our population, single women, and especially those between 30 and 40, we would all be pleased to find that their eschewal of the matrimonial bond has not so heavy a penalty attached to it as their figures here would indicate.

As regards the national relations of insanity in Upper Canada, I have thought it best not to take in the whole period of 24 years; for at the commencement of this period our population embraced a much larger proportion of persons of foreign, that is non-Canadian, birth, than of later years. I have therefore taken the last of six years, as more fairly representing all nativities.

Nativities of 995 patients admitted from 1st January, 1859, to 1st January, 1865.

| Nativity. | Numbers sent to Asylum. | Number in Prov. Population. | Per cent. of Asylum pop., of 995. | Per cent. in Pro. Pop |
|---|---|---|---|---|
| Ireland..... | 353 | 191.231 | 35.49 | 13.70 |
| Canada..... | 266 | 902.879 | 26.73 | 64.70 |
| Scotland..... | 149 | 98.792 | 14.97 | 7.07 |
| England ..... | 143 | 114.290 | 14.37 | 8.18 |
| All others..... | 84 | 88.899 | 8.44 | 6.35 |
| Totals..... | 995 | 1.396.091 | 100.00 | 100.00 |

It will be observed from the above figures that in proportion to their numbers in the population, those of Irish birth have furnished the lar-

gest number of insane:—being equal to about $2\frac{8}{10}$ times their true proportional number, as derived from the census. The Scotch exceed the English a little. The English and Scotch together come near to twice their fair proportional number as derived from the census.

The low figures of the native Canadians, in asylum population, and their high figures in the Provincial census, stand in strong contrast with those of the Irish, Scotch, and English. The latter three making, 404,-313, or about 29 per cent. of our population, have furnished 645 lunatics out of 995, or nearly 65 per cent.; whilst the native Canadians, who are equal to about 65 per cent. of our population, have furnished only about 27 per cent. of the asylum population.

We are, however, to bear in mind that the portion of our Provincial population, designated in the census of native Canadians, comprises a large number under the age at which insanity begins to manifest itself. If we strike off 40 per cent. as the equivalent for those falling under this age, and allow all the Irish, Scotch, and English, to rank above it, (which however, is to deal perhaps too liberally with them,) we shall not be far from the just standard of comparison. This would reduce the native Canadian proportion in the Provincial census to 39 per cent.; but this 39 per cent. of the Provincial population has furnished only 26.73 per cent. to the asylum; whilst the Irish, Scotch, and English, who together make less than 29 per cent. of the Provincial population, have given to the asylum very nearly 65 per cent. of its last six years' population.

It must surely be inconsistent with the truth to hold, as I am well aware many do, that Canada is more prolific of insanity than the mother country. I have hardly ever accompanied a visitor of British or Irish birth through this house who has not expatiated on the wonderful excess of insanity in Canada, over his native country. Remarks of this kind come with a sorry grace from persons constituting 29 per cent. of the people outside, and 65 per cent. of those inside our walls. There is, indeed, much insanity in Upper Canada, but, like other articles, it is very largely imported. We must not, however, complain that the balance of trade, in this branch, is so much against us; rather let us hope it may long continue so.

Next in interest to the relation, in Upper Canada, between nativity and insanity, is that between religion and insanity.

Religions as recorded in 3114 patients, admitted in 24 years.

| Religion. | Number Admitted. | Number in Prov. Population | Per cent. of 3114. | Per cent. in Prov. Population. |
|---|---|---|---|---|
| English Church..... | 977 | 311.565 | 31.37 | 22.30 |
| Church of Rome ..... | 746 | 258.141 | 23.96 | 18.49 |
| Presbyterian ..... | 709 | 303.384 | 22.77 | 21.73 |
| Methodist ..... | 413 | 341.569 | 13.26 | 24.48 |
| All others..... | 269 | 181.432 | 8.64 | 13.00 |
| Total ..... | 3114 | 1.396.091 | 100.00 | 100.00 |

The above table is, as regards the Church of England, incorrect. During several years, in the early history of the asylum, a considerable number of patients were designated merely *Protestants*, and as the Church of England about that time claimed to be *the* Protestant church of Upper Canada, these patients were allotted to her; but I have found some of them with Scotch names; and several of them, Scotch as well as Irish, I have found were undoubtedly Presbyterians; probably too, a few were Methodists. I think it, therefore, proper to furnish a more reliable statement, which, being derived from my own records, I am certain is reliable.

Religion of 1732 patients admitted from 1st July, 1853, to 1st January, 1865.

| Religion. | Number sent to Asylum. | Number in Prov. Population. | Per cent. of Asylum population 1732. | Per cent. in Prov. Population. |
|---|---|---|---|---|
| English Church..... | 474 | 311.565 | 27.36 | 22.30 |
| Church of Rome..... | 412 | 258.141 | 23.80 | 18.49 |
| Presbyterian..... | 422 | 303.384 | 24.36 | 21.73 |
| Methodist ..... | 271 | 341.569 | 15.65 | 24.48 |
| All others..... | 153 | 181.432 | 8.83 | 13.00 |
| Total ..... | 1732 | 1.396.091 | 100.00 | 100.00 |

On comparing the last table with the preceding, it will be observed that the Roman Catholic per centage remains almost unchanged, whilst that of the Church of England is reduced, and those of the Presbyterians and Methodists increased, verifying the remarks made as to the errors in registration under the Church of England head, in the early years of the asylum.

The last table may be regarded as exhibiting fairly the relative numbers of insane in the several denominations given. On analysis it will be found that the highest rate of insanity is that contributed by the people of the Church of Rome, and next stands that of the Church of Eng-

land, whilst lowest of all is the proportion given by the Methodists. Whether these results coincide with the prevalent belief heretofore existing with the public generally, stands not with me to decide. I give the facts, and leave to others to form their own conclusions from them.

The following table shows the numbers, according to religion, of patients remaining in life, in the several asylums on 1st January, 1865, out of the total 3114 admitted at the Toronto asylum :

| Asylums. | English Church. | R. C. Church. | Presby. | Metho. | All others. | Total. |
|---|---|---|---|---|---|---|
| Toronto..... ... | 137 | 130 | 98 | 61 | 46 | 472 |
| Malden..... | 42 | 65 | 31 | 15 | 18 | 171 |
| Orillia ..... | 33 | 38 | 22 | 14 | 12 | 119 |
| Total..... | 212 | 233 | 151 | 90 | 76 | 762 |
| | 21.69 | 31.23 | 21.30 | 21.79 | 28.53 | Per cent. on respective admissions. |

The per centage on admissions, of patients remaining, may be taken as representing fairly the comparative incurability, especially as it will be seen by the next table that the proportionate mortality in all the denominations has been almost alike.

The following table shows the number who have died in the chief asylum and the Branches, of 3114 admitted, up to the 1st January, 1865:—

| | Eng. Ch. | R. Cath. | Presby. | Meth. | All others. | Total. |
|---|---|---|---|---|---|---|
| Deaths..... | 205 | 155 | 142 | 86 | 62 | 650 |
| Admissions..... | 977 | 746 | 709 | 413 | 269 | 3114 |
| Per cent. Mortality on Admissions. ..... | 20 98 | 20.77 | 20.17 | 20.82 | 23.00 | |
| Per cent. Discharges on Admissions. [Elopers included. ..... | 57.33 | 48.00 | 57.39 | 57.39 | 48.75 | |

The rate of mortality in the various religious denominations has been almost equal; and the proportions in the discharge have been almost alike in the three leading Protestant denominations. The proportion of the discharges of Roman Catholics falls below that of other denominations, to an extent corresponding to the excess of this class remaining in,

—that is, to their comparative incurability. How are we to account for the above coincidences? Shall we say that asylum residence is equally conservative, or equally destructive of life? "Judge ye."

The apparent comparative exemption of Methodists from insanity, in Upper Canada, is a circumstance closely associated with the similar fact under the head of nationality,—the comparative exemption of native Canadians. It is my belief that a much larger proportion of Methodists than of any other religious denomination, are of Canadian birth; but, at the same time, it cannot be denied, that the general habits of Methodists, and the more comfortable physical condition, therewith associated, must operate as important mental conservators. The Roman Catholic asylum inmates are, in the great majority, of Irish birth, or immediate extraction. When we reflect that this class have, for ages, *as a race*, been marrying in and in, and call to mind the serious bearing of this course on the development and perpetuation of insanity, and the continual augmentation of hereditary taint certainly resulting, we are not surprised that they present the highest figures in the rate of incurability. It is not because their cases are comparatively more chronic than those of other religions, or nationalities; perhaps, indeed, the fact would be found the opposite, for a large proportion of them are poor, and their families are unable to keep them at home, and very many of them have neither home nor friends. They, therefore, are sent to the asylum more promptly than other classes. Some of them, too, are very disorderly, and troublesome, and consequently fall under the notice of magistrates or other local authorities, who are at all times anxious to have opportunities of exercising their high functions, whether in committal to the common gaols, or in transmission to the asylum, the chief purpose of which Institution would seem, in their estimation, to be that of a secure lock-up, and *to them* a cheap boarding house, for people whom they are unwilling to feed at *local* cost.

The following figures exhibit the periods of treatment in 861 patients' discharged during my incumbency, *i.e.*, from 1st July, 1853, to 1st January, 1865:—

| | Under 3 mos. | 3 to 6 mos. | 6 to 9 mos. | 9 to 12 mos. | 1 year to 2. | Over 2 years. | Total. |
|---|---|---|---|---|---|---|---|
| | 225 | 204 | 143 | 72 | 138 | 79 | 861 |
| Per cent.... | 26.13 | 23.69 | 16.61 | 8.37 | 16.03 | 9.17 | in 861 |

Discharges of unrecovered patients are not made unless in a very lim-

ited number of cases, at the instance of friends. The aggregate of discharges of unrecovered patients in the period just referred to would lie between 5 and 10 per cent.; and of these a considerable proportion were improved, or much improved.

The mortality of the Toronto Asylum in 1864 has exceeded that of 1863, by 40 per cent., having been 35 against 25. One half of the deaths in 1864 have been from two forms of disease, found to be fatal in all asylums,—general paralysis, (or as now more appropriately named, general paresis,) and phthisis. Nine patients died of each of these diseases. Of the nine deaths from general paresis, eight took place in men; and of the nine from phthisis, eight took place in women.

In eight of the nine cases of phthisis, the disease was of the form which, in asylums, is designated latent. The patients had no cough, no expectoration, no hectic exacerbations, no colliquative diarrhœa; they never, or very rarely, complained of any pain. *Post mortem* examination showed extensive, and often far-advanced pulmonary tubercular destruction. Our proportion of deaths from phthisis in 1864, has been below the average.

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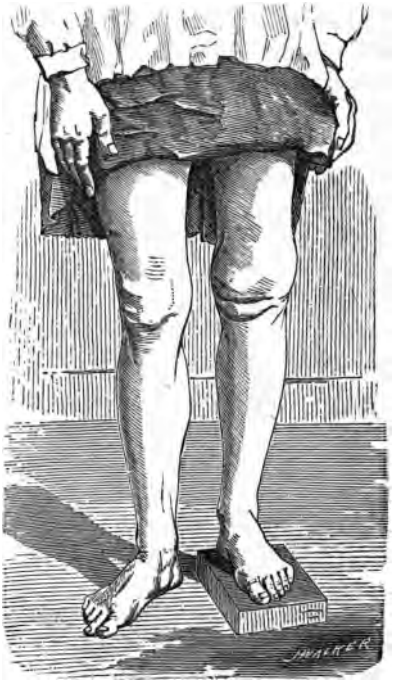
*Excision of the Knee-joint. Recovery.* By JAMES A. GRANT, M.D., F.R.C.S., Edinburgh; M.R.C.P., London, &c.; Attending Physician, General Protestant Hospital, Ottawa, C. W.

Henry Mathers, aged 39 years, a farmer, of regular conformation and robust habit of body, prior to disease attacking his knee-joint. Parents healthy, and neither consumptive nor scrofulous. Admitted into the General Protestant Hospital, Oct. 20th, 1864. HISTORY.—The infliction of the injury which was supposed to have originated the diseased condition of his knee-joint, dates back about twelve years, at which time the joint was severely wounded by a drawn knife. The convalescence from the injury was exceedingly tardy, months elapsing before the foot could be placed to the ground. The usual remedies, such as steeping, leaching, counter-irritation, &c., were all had recourse to, but with unsatisfactory results, there having remained a lingering pain associated with considerable uneasiness in the joint, upon even the slightest pressure or most moderate exertion. As time rolled on, the joint became painful at night, so much so as to interfere with rest, and gradually reduce his system, the various organs participating more or less in the debility which had its origin, doubtless, in those pathological changes, taking place in the joint, and just in proportion to the activity or inactivity of those structural alterations, was to be observed an increase or diminution in the intensity of suffer-

ing. This train of symptoms continued, with little variation, throughout the greater portion of the time which elapsed from the date of the accident to his admission into the Hospital. A glance at his physique was alone sufficient to point out that changes of a most marked character were taking place in his system. The haggard expression of face, the general flaccidity of the muscular system, the loss of appetite and tendency to occasional diarrhœa and night sweats, were highly characteristic of that relaxed state of the system, which results from long-continued and perverted functional activity of a joint, associated with, and depending upon, most marked organic change of structure.



Attitude of patient. Appearance of the joint externally.

In the erect position the attitude of the patient was sufficient to point out the seat of disease, the limb having a *flail-like* appearance. The leg could not be extended ; the flexed condition of the thigh and consequently shortened condition of the limb, removed the substantial support of the sole of the foot, and substituted the slight support of the tips of the toes, and even on these, the most moderate pressure was sufficient to excite pain in the affected joint. The outline of the limb gave an accurate

idea of the distortion which had taken place, and the atrophied condition of the muscular structure of the thigh, possessing complete nervous sensibility, was in itself an index of protracted articular disease in the affected joint. The natural contour of the joint was lost, being considerably enlarged, irregular as to its outline, and possessing no small degree of solidity; more or less pain on pressure, which can be localized in particular spots, with a marked increase towards night; very slight motion in the joint, the limb constantly retaining its semiflexed position. No sinuses were to be observed about the joint, and the integument over it presented only a moderate degree of discoloration. The flexed position of the limb, and marked difference, when contrasted with the healthy knee, placed beyond a doubt the likelihood of the destruction of the crucial ligamentous connection, associated with articular structural alteration. On the slightest manipulation of the joint, pain was produced, attended on several occasions with marked indications of syncope, and the parts when thus irritated, seldom become free from pain, for at least six or eight hours. The patella was firmly anchylosed anterior to the right articular surface of the femur; and on either side of the joint, the hamstrings could be felt, tense, firm, and unyielding, in a perfect state of spastic contraction. In this condition Mr. M. became an inmate of the Hospital, much reduced by occasional fever, night sweats, and attacks of diarrhœa. In consultation with the medical staff, having made a careful examination of the joint, as to the *extent of bone diseased; the implication of surrounding parts; the non-coexistence of any internal organic disease; the dependence of fever upon the joint disease, and the favorable appearance of the patient, notwithstanding the duration of the disease* (a period of twelve years), the propriety of excising the joint was decided upon, the combined local and constitutional indications being favorable to such a proceeding.

Nov. 2nd. I excised the joint, adopting the U incision. The flap being carefully reflected, the quasi-joint was exposed, and the soft anterior tissues being divided, as well as the lateral connecting structures, its whole interior was rapidly brought to view, by flexing the leg backwards upon the thigh. The patella was first removed, and afterwards the articular surfaces of the joint were sawn off, from before, backwards, with an ordinary amputating saw, the extent of bone removed being, from the femur fully an inch and a half, and from the tibia over three quarters of an inch. Two or three small vessels required a ligature. All clots being now washed away, and the sharp edges of the bones pared off, the leg was extended, the flap secured, and the limbs, after being bandaged, carefully placed in *Butchers' Box*, thoroughly wad-

ded, which answered every purpose most admirably; the entire operation being accomplished under the influence of chloroform. Half a drachm of liq. opii. sedat. was given immediately after the operation. 8 p. m. Has had some sleep and feels comfortable; pulse 90, tongue moist. Opium repeated. Nov. 3rd had a very tolerable night, finds the knee free from pain, rather copious oozing from the wound; it entirely ceased after the third day. Nov. 8th. Knee dressed; looking well. No tension or inflammatory appearance about the sutures. Very slight discharge from the wound. Nov. 12th. All the sutures were removed, not one having sloughed out, and the greater portion of the wound united by the first intention. From this date the wound was dressed every two days with simple cold water dressing, until all discharge had ceased, which was about the end of the tenth week. Three months previous to the date of operation, an issue had been formed on either side of the joint. These had perfectly healed, but after the operation, at the end of the fourth week reopened spontaneously and discharged more or less until the end of the ninth week, at which time they completely closed. In fact, this spontaneous effort of nature appeared to modify the intensity of the inflammatory action, which might otherwise have taken place, for during the whole progress of the case, no purulent discharge could be detected except from the seat of the issues. Dec. 10th. The strength of the limb much increased, and from all appearances there is evidently some soft union between the bones and the external wound. The limb is quite straight, and the general health of the patient very much improved. Jan. 18th, 1865. The parts are firm, and he can move about the ward with ease, supported by a small crutch. Jan. 30th. Drove to the city without any difficulty, and had a photograph taken, from which the wood-cut was executed (see p. 413), giving a somewhat exact representation of the limb, now changed from deformed angularity, with œdemitous leg and attenuated thigh, to a healthy looking extremity free from pain, and, although stiff, moved about with ease and freedom, by a set of thigh and leg muscles, which have, in a great measure, recovered their tonicity and corresponding healthy development. After the first week, his system was supported by porter, in conjunction with beef-tea, a point of vast importance, when nature has to build up parts of great extent, and in a system much debilitated, by long continued disease. Feby. 5th. He was discharged to enjoy the home comforts of a rural seat, the limb being now quite strong and sufficient to support the body without any stick, and only two and a quarter inches shorter than the opposite leg.

PATHOLOGICAL STATE OF THE JOINT.—Integument over the patella immovably fixed down upon the bone, but laterally and posteriorly it pos-

sessed considerable mobility. Patella otherwise healthy excepting its ossific attachment. Interarticular structures entirely changed the exposed substance, appearing to be partly thickened synovial membrane associated with the well known peculiar softening of the proper tissue of the ligaments, the result of degeneration, combined with more or less infiltration of inflammatory products. Thus, by gradual softening, yielding and successive attempts at the organization of the lymph effused, the result of a low grade of inflammatory action, a description of connecting tissue was slowly built up, wedge-shaped, between the bones, becoming further and further apart, and at the same time retaining the joint in its spuriously anchylosed condition. This structure being divided and the joint exposed *in toto*, showed an absence of the proper articular cartilages, and a deeply eroded state of the articular facets of the tibia, from which there exuded a small quantity of sero-purulent material. The section of the bones afforded little resistance to the saw, and on the cut surfaces there were not to be observed any circumscribed patches of yellow induration of bone, such as has been described by the leading European pathologists.

Ottawa, Feby. 10th, 1865.

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*Three cases of poisoning by the root of the Cicuta Maculata Lancifolium, or Hemlock.* By T. R. DUPUIS, M.D., and H. P. YOUMANS, A.B., M.D., Odessa, C. W.

Joshua Booth, aged 47, of a plethoric habit, ate roots of cicuta maculata, Nov. 25th, 1864; continued chewing them from 10 o'clock, a.m., until 12 o'clock noon; dined at 12.25, seemed perfectly well until 2.50 p.m., when symptoms of poisoning manifested themselves as follows: Extreme nausea, stupor, falling of the upper eyelids, dropping of the lower jaw, general relaxation of the muscular system, lividity of the lips, and paleness of the face. Free emesis was produced by the use of tartar emetic, ipecacuanha, and mustard, accompanied by considerable quantities of milk and warm water. After the evacuation of the contents of the stomach, he seemed roused, and looked more lively, but soon relapsed into the same state of stupor. At 2.45 p.m., he was seized with a violent convulsion: convulsions continued at intervals of ten minutes until death,—the duration of each was about five minutes,—they consisted of tetanic spasms, and rigidity of all the muscles of the body,—hands elevated and extremely pronated,—feet arched and toes inverted,—body stiffly erect and head thrown back,—frothing at the mouth,—pulse quick, weak, and sometimes scarcely perceptible,—pupils contracted.

During the intervals between the convulsions, the pulse was slightly increased in force and frequency, pupils dilated,—groans were uttered, especially just before the commencement of a paroxysm. After emerging from the last convulsion, the pulse became slow and laboured; respiration was irregular, slow and stertorous; and, finally, death by coma followed at 4 p.m.

Nellie Booth, aged 7 years, ate roots of cicuta maculata at the same time—convulsions commenced at 2.25 p.m. In addition to the symptoms noticed in the foregoing case, there was giddiness and vertigo, followed by nausea and vomiting (these symptoms, probably, were more marked in her case, because emetics were not administered, until after convulsions had commenced), spasmodic contraction of the orbicularis palpebrarum and muscles of the orbit, causing the eyes to protrude and roll about—also twitching of the muscles of the face. Respiration was at length arrested by the last spasm, and death by asphyxia ensued.

George Bruton, aged 37, ate a portion of the root as large as a horse bean at 11 o'clock, a.m.; at 2.50 was attacked with nausea, giddiness, a sensation of weakness of the limbs, and general weariness. Emetics were administered, which thoroughly evacuated the contents of the stomach. He experienced some giddiness, loss of appetite, and a feeling of general prostration for six or seven days, from which he at length completely recovered.

The cicuta maculata is a very common plant in this part of the country, growing in wet meadows, along the sides of brooks, and in other marshy places, and with its allied genera Sium and Heracleum, receiving the vulgar name of wild parsnip. It is an umbelliferous plant, having a perennial fleshy, thick, almost tuberous root growing in clusters around a central axis, and an herbaceous, finely striated, hollow, stout branching stem from three to six feet high, streaked and spotted with purple. The lower leaves are triternately and the upper ones biternately divided: the leaflets oblong-lanceolate, acuminate, coarsely serrate, smooth, and with veins running to the notches, instead of the points, of the serratures. The flowers appear July and August; they are white, and in terminal and axillary umbels, composed of umbellets with sometimes one or two leaflets as a false involucre, but more commonly none. The involucres are composed of five or six short linear leaves. The calyx is minutely five-toothed and entirely adherent to the ovary; petals five, obcordate and with an inflexed point; stamens five, alternate with petals; styles two, and persistent. Fruit subglubose didymous; the two carpels dry and seed-like, strongly and equally marked with five flattish ribs, in the intervals of which are single oil-tubes, and at the commissure two. Carpophore two parted, and the seeds terete.

We have not seen any analysis of the proximate principles of this plant, and are therefore unable at present to say in what manner the poisonous principle exists. The activity of it as a poison, and the frequent accidents resulting from its use, render it a plant of more than ordinary interest, and will, it is hoped, invite the attention of practical investigators.

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*Rupture of the Uterus,—Escape of the Child and Placenta into the abdominal cavity—Recovery.* By EDWARD M. HODDER, M.D., F.R.C.S.Eng. Fellow of the Obstetrical Society of London, President of the Medical Board of C. W., &c., &c.

Mrs. W., æt. 35, the mother of nine children, of average height, well made and healthy appearance, was taken in labour at noon on Tuesday, 8th Sept., 1863. The pains were slight, so that but little progress was made; and Dr. Aikens, the medical gentleman engaged to attend her, was sent for at about 6 o'clock, p.m. He had attended her on three previous occasions, and was twice obliged to use the forceps in consequence of the large size of the head of the children. Twice she conceived with twins, so that the present was the seventh pregnancy and the ninth child—all born alive. On making an examination all appeared quite well, presentation natural, but uterine action feeble. He then left her and returned at 10 p.m. But little change had taken place, the pains were weak, the os uteri dilated to the size of a dollar, soft and yielding; supposing that the pains might increase if the liquor amnii was discharged, he ruptured the membranes; no increase in their severity followed, the only perceptible change being, that they were then referred to the fundus uteri instead of the back and lower abdomen as before, yet they were not so severe as to attract any particular attention, either of the patient or her attendants.

After remaining with his patient for some time, as no advance was made, Dr. A. returned home, leaving directions to be sent for when required. Not having received any message during the night he called at 6 a.m., Sept. 9, on his way back from another case. She was weak and pale, and he ascertained that twice during the night she had passed large quantities of blood. On making an examination, to his surprise, he found that the head had entirely disappeared, that the uterus was contracted, and that the child and secundines had escaped into the abdominal cavity. A messenger was immediately dispatched for myself; and, on my arrival, shortly afterwards, I found her in the following condition: pale but not blanched, the countenance somewhat anxious, skin cool,

respiration hurried, pulse 124, firm, voice good, and she was free from the pains of labour, but she complained of soreness and pain across the scrobcordis and upper portion of the abdominal cavity. An examination of the abdomen externally disclosed the form of the fœtus distinctly, lying obliquely across, the head down, and in front, the nates above and to the left of the hypochondriac region.

I next passed my hand into the uterus to examine its condition, and had no difficulty in discovering at its upper and right part a large rent, the edges of which were soft and flabby, offering not the slightest obstacle to the passage of the hand into the abdominal cavity; in fact it was almost impossible to state where the uterine cavity ended, or the abdominal one commenced except by feeling the child and the intestines in the latter. The left half of the uterus was much firmer and more contracted, and presented a kind of cul-de-sac beyond which the fingers could not extend. While my hand was still in the cavity of the abdomen, Dr. Aikens and myself decided that as the rent was so extensive, the uterus on that side so softened and but little contracted, and the child so easily grasped, that it would be better to attempt the delivery *per vias naturales* than to allow the child to remain where it was, or to resort to gastrotomy. Accordingly I seized one leg of the child, and, without any difficulty, turned and extracted it, the head alone requiring some slight force to draw it through the brim of the pelvis.

The cord being divided and the child removed, slight traction brought the placenta to the edge of the wound from the cavity of the abdomen where it had also escaped; and again introducing my hand, I moved it without being aware of the slightest resistance being offered by the edges of the wound. Ascertaining that no hernia of the intestines followed the child or placenta, I withdrew my hand, and the uterus contracted more firmly than it had done before. A bandage was applied lightly, and the patient made as comfortable as circumstances would allow. There was no hemorrhage; she appeared as well after the operation as she was before, the pulse firm, and the countenance calm.

Tinct. opii. ʒ i was given with such directions as were required.

2 P.M. She is calm and collected, free from pain of an acute kind, complaining only of soreness across the upper part of the abdomen, but which is not increased upon pressure. Pulse 124, firm, respiration somewhat hurried, tongue clean and moist, has slept a little, and twice voided urine in the bed; slight tympanitic distention.

Tinct. opii. ʒ ss was given, and perfect quiet enjoined.

9 P.M. Continues much as before; pulse 130.

Thursday 10, 11½ a.m. She expresses herself as feeling more comfort-

able, and her countenance was much less anxious; skin comfortably warm; pulse 116, full and soft; tongue moist and white, respiration less frequent; has passed her urine freely two or three times, tympanitis not increased, and firm pressure can be borne over every part of the abdomen without pain except the uterine region, yet tenderness is generally felt, particularly along the margins of the ribs. There has been no nausea or vomiting, no rigors, and she has slept often during the night.

Continue ʒ ss. T. opii., from time to time, and a tablespoonful of barley water or other light food to be given occasionally.

In the evening vomiting came on, but without distress, the ejected matter being mucous, of a deep green colour; pulse went up to 125, but in all other respects she was much the same as in the morning. Continue as before.

Friday 11, 11½ a.m. She has not passed a good night in consequence of the vomiting continuing, but she is free from pain; her countenance somewhat pinched, pulse 116, soft but not weak, voice good, perspiration profuse, general, and warm, tongue moist and clean, urine freely passed, discharge moderate in quantity, dark coloured and offensive; says she feels weaker than yesterday: no laudanum was given since 11 p.m.

Ordered ℞. pulv. opii. gr. j conf. aromat, gr. iii., ft. pil. 3 tia q. q. h. s.

Vulva to be sponged with tepid water.

Saturday 12, 11½ a. m. With the exception of weakness she is much the same, quite easy and free from pain; she lies on her back with the knees extended, and can turn in bed without uneasiness; has passed much flatus and the intestines less distended; pulse 128, weak: skin moist and warm, voice and countenance good, vomiting entirely ceased, She complains only of want of food, but firm pressure produces soreness over the uterus.

Ordered to continue the pills and ablutions as before.

To have beef tea, ʒ ss. every two hours.

Sunday 13, 2 p.m. Purging came on at 4 p.m., yesterday and continued more or less until 7 a.m., the number of passages being about twelve or thirteen, of a dark bilious character, but not very offensive. She does not appear to have been reduced by it, as her countenance and voice are both good, eye bright and clear, tongue clean and moist at the edges with a brownish fur down the centre; pulse 116, firmer than yesterday, no vomiting, nausea, or pain, except the soreness over the uterus; she lies on her side with knees stretched out or flexed at pleasure, and she expresses herself as feeling stronger and better than yesterday.

Continue beef essence, and take conf. aromat. gr. xv., tr. opii, m. x ex aqua cinnam ʒ i 3tia. q. q. h.

Monday 14, 11½ a.m. The bowels have acted only twice since yesterday, without pain or distress, and she continues to improve in every respect. There is a copious fœtid discharge from the uterus, which is carefully attended to. Continue medicine as required, beef essence and toast.

Thursday 17. Since last report she has continued steadily on the mend; pulse firm, ranging between 108 and 115; tongue clean; bowels generally act once a day: countenance good; tympanitis nearly gone with scarcely any soreness over the uterus. She turns freely from side to side in bed, appetite returning, and sleeps comfortably. The discharge from the uterus less offensive and greatly diminished in quantity. Continue use of syringe.

Discontinue medicines unless required. To have a little broiled chicken for dinner.

Sept 29. With the exception of weakness she has nothing to complain of. She is able to sit up; discharge ceased; has no pain, and eats, drinks, and sleeps well.

*Remarks.*

Rupture of the uterus is the most fatal of all the accidents to which the lying-in-woman is liable, with the exception of rupture of the bladder; yet, in so dangerous a complication as this, the rules laid down for our guidance by numerous writers on midwifery are vague and contradictory

Thus, by men of equally high reputation as Merriman, Denman, Smellie, Wm. Hunter, Davis, and Blundel, we are advised to leave the case to nature; while Burns, Velpeau, Lee, Collins, and Churchill recommend turning; and Dewees, Ramsbotham, Jacquenier, Colombat, Ham ilton, and others consider gastrotomy the only chance left to the unfortu nate sufferer.

I believe I am correct in saying that the universal opinion of the profession appears to be, that delivery, when practicable, should in all cases be resorted to, when a favourable condition of the soft parts, and a proper proportion between the head and the pelvis will allow of the introduction of the hand and delivery by version accomplished. But where obstacles to speedy and easy delivery exist, as from contraction of the edge of the rent, after the escape of the fœtus into the peritoneal cavity, or from an undilated os uteri, or from a contraction of the pelvis, or partial closure of the vagina, the rule of practice is by no means determined, and great diversity of opinions exist as to the proper course to be pursued.

In a very elaborate and most valuable monograph, published by Dr Trask, in the American Journal of the Medical Sciences for 1848, in

which the histories of three hundred and three cases of rupture of the uterus are given, he says:—"Our series of cases shows that the principle upon which the profession now almost universally act, of accomplishing delivery after rupture, is a correct one. Of 154 delivered by artificial means, ninety-seven died; fifty-seven survived.

Of eighty abandoned undelivered, sixty-five died and twenty-four survived. Of thirty-one delivered by natural efforts, twenty died and eleven survived; and these include, in both instances, cases of rupture of the os, in which the peritoneum was not involved.

Of six in whom artificial delivery was tried and failed, all died undelivered.

A comparison of those delivered by art and of those abandoned undelivered, yields thirty-seven of the former, as saved, to twenty-seven of the latter, in the hundred, showing that the chances in the former case are considerably better than in the latter."

Again, quoting from Dr. Trask, he says:—"First let us consider cases of rupture and escape into the abdomen of the whole fœtus, or of the head, with the whole or part of the body;" and referring to his cases we find the following results: of ruptures during parturition there were saved by the operation of gastrotomy twelve, and lost four. Abandoned, saved twelve, lost twenty-three. Turning, &c., saved nine, lost twenty-one.

Next let us consider the cases in which there was diminution of the diameters of the pelvis from distortion, or contraction, exastosis, &c.

Gastrotomy—saved, 5; lost, 3.
Undelivered—saved, 0; lost, 11,
Perforation—saved, 3; lost, 16.
Other methods—saved, 11; lost 14.

Total of both cases.

Gastrotomy—saved, 18; lost, 7.
Undelivered—saved, 18; lost, 50.
Other methods of delivery—saved, 23; lost, 51.

Of those cases which recovered after artificial delivery, we have thirty-four cases in which delivery was accomplished with ease, and fifteen in which it was effected with more or less difficulty.

Of the cases that died after artificial delivery, in twenty-one cases delivery was easy, in thirty-five it was difficult."

This statement exhibits, most conclusively, the influence of a speedy and easy delivery on the patient's chance of recovery, by showing the

great preponderance of easy deliverances in the cases of those who survive, and of difficult deliverances in those who sink.

In those cases in which the head of the child is within reach, and the pelvis ample, we are told by Dr. Trask that the treatment must depend upon the situation of the fœtus.

1. Should it have descended into the pelvic cavity, and *be still found remaining there, if the child be living*, delivery by the forceps should unquestionably be attempted.

2. But if the fœtus be known to be dead, the delivery may be much facilitated by lessening the size of the head by evacuating its contents.

3. Should the head become impacted in the cavity of the pelvis, or at the inferior strait, perforation must be had recourse to.

4. When *contraction exists at the superior strait*, we know not the amount of difficulty that may be experienced in delivery *per vias naturales*.

Two questions then arise, first, have we any operation which, in case of escape through a rupture of the uterus, followed, as it must be in almost every case, by a contraction of the edges, will expose the patient to less risk than the forcible dilatation of the rest, and the delivery through the natural passages after version? and, secondly, have we, when a contraction of the brim of the pelvis exists from deformity or from morbid growths, which would render delivery tedious and difficult, any mode of delivery which shall not only be speedy, but which shall in the main give a better chance of success than embryotomy?

In the first instance, authors have cautioned us against any forcible dilatation of the orifices by which the fœtus escaped, on account of the great hazard, and the great difficulty, if not impossibility, of succeeding. The same is true when rupture has taken place, when the os is only partially dilated, and is undilatable, or when it has contracted after the rupture.

Two courses have been proposed—one to abandon the patient to nature; the other is gastrotomy. Dr. Trask continues: "We have shown conclusively that non-interference affords a patient a far inferior chance to any other course that can possibly be proposed; but, giving the advocates for non-interference all they can claim, their success is anything but flattering; for on referring to the histories of most of those who eventually recovered, their existence was for months, and in some cases for life, one of suffering and anything but desirable. There is nothing to make us follow this course; reason and experience are against it."

Gastrotomy, then, is the only course which we shall be justified in adopting.

The second condition is one that has not so generally engaged the

attention of obstetric authors. But the cases recorded by Dr. Trask furnish instances of obstruction to delivery from exostosis, fibrous tumours, bands in the vagina, and undilatable os uteri. "The success of the attempts made to dilate the os, and to divide resisting bands, is by no means such as to invite a repetition. In short, as a general rule, from whatever cause we might be led to anticipate a protracted and difficult delivery by the natural passages, gastrotomy will afford the best chance of recovery. The only exception is that of impaction of the head in the cavity,—or at the inferior strait, where perforation is clearly indicated."

I have quoted thus largely from Dr. Trask, and adopted his own language as less likely to lead to error, in a matter of so much importance and hope that the readers of the Canada Medical Journal will not consider that I have occupied too much of their valuable space in discussing the treatment of cases, which, may possibly but rarely if ever come under their care.

Since the publication of Dr. Trask's monograph in 1848 it has fallen to my lot to meet with nine cases of rupture of the uterus—a brief account of which I herewith give—thus showing that these accidents occur more frequently than is generally supposed.

*Case I.* Was a primipara, æt. 32 stout, muscular, and plethoric; os and passages undilatable, pains very strong, liqr. amnii discharged early. She was bled two or three times, kept under the influence of ant. tart., fomentations, injections, &c., but without avail. Infiltration took place into the os and cervix, and at last during a very violent pain, the whole became detached, after which the head descended and passed the perineum with difficulty.

This woman died on the third day afterwards of peritonitis—the rent did not extend to the body of the uterus, as ascertained at the *post mortem* examination.

*Case II.* The woman was the mother of a large family (eight or ten), had a very large fibrous tumor of the uterus, which from pressure had produced absorption and thinning of the uterine walls. Her labour was extremely easy, and did not exceed two hours in duration; all went on well until the head was at the outlet, when profuse and violent flooding came on after a pain somewhat more severe than the preceding; the countenance fell, pulse became small and feeble, syncope followed, and in this state she continued for some time; stimulants were freely given which had the effect of restoring her to consciousness, but did not increase the uterine contractions, and, as the head was at the outlet, the forceps were easily applied and a dead child brought speedily into the world. The birth of the child was followed by a gush of blood which again

reduced her to a state of syncope, from which she never rallied, but died in the course of a few minutes.

Dr. Bovell and myself anticipated danger in this case from the enormous size of the tumour, so that the moment labour commenced Dr. Bovell was sent for and I followed shortly afterwards. On a post-mortem examination it was found that the uterus had become as thin as brown paper where the tumour pressed upon it, and that a rent several inches in extent had taken place which caused the flooding and consequent death. The particulars of this case were published by Dr. Bovell in the "Upper Canada Medical Journal."

*Case III.* was one of interest, inasmuch as the rupture occurred without any warning whatever, neither was it suspected until after delivery. Dr. O'B. had been in attendance upon the case from about midnight until 5 a.m., when the pains, which had gradually decreased in strength, ceased altogether. At 8 a.m. the Doctor wrote me a short note requesting me to come and deliver with forceps, this being her third confinement. On my arrival I found the woman rather pale, no anxiety of countenance, respiration calm, pulse about 80, weak, and entirely free from pain, neither had she felt any since 5 a.m., and had taken nourishment. The head was at the vulva, the parts relaxed; nothing was wanting but one or two pains to force the child into the world. I applied the forceps, and without the least difficulty brought down the head of a dead child. The body shortly followed. Dr. O'B. keeping up firm pressure on the uterus, which contracted feebly, we waited for full half an hour for the separation of the placenta; and, as it was not expelled by the uterus, Dr. O'B. introduced his hand with the intention of stimulating the uterus to action, and bringing it away. In dismay he turned round to me, and said, "I feel the intestines." Knowing him to be a very nervous man, and not suspecting a rupture from the condition of the patient, I said, "If you carry your hand high enough perhaps you may feel the liver, when, to my surprise, after a moment or two of delay, he exclaimed "My God, I do." This was the first intimation of such a severe accident. He sought for the placenta, found it amongst the intestines, and brought it away. The uterus contracted moderately, there was no hemorrhage, and she expressed herself as feeling comfortable. For three days not a bad symptom showed itself, the pulse never exceeding 86; no pain, tenderness, distention, or other sign of constitutional disturbance, when, on the morning of the fourth day, great prostration, with tympanitis, a rapid, small, and feeble pulse, and sunken countenance gave evidence of her approaching end. She sank in about twenty four hours from the beginning of the bad symptoms. No *post-mortem* was allowed by her friends.

*Case IV.* was an unfortunate case of mal-practice, primipara. The pelvis was narrowed at the brim, the uterus acting violently, the head wedged, the waters long discharged, when the medical man in attendance gave ʒ ss of the ergot which speedily produced the fatal result. The child escaped into the abdomen, and she died in a very short time undelivered. No *post-mortem*.

*Case V.* In this case the rupture took place during a very easy labour, the fœtus and placenta escaping into the abdomen. I arived at the moment Dr. Bovell had passed his hand through an extensive rent in the uterine walls in search of the child; he turned and delivered without difficulty. There was little or no external hemorrhage, but the woman died from exhaustion on the third day; there had been considerable internal bleeding but no sign of inflammation. The uterus was very soft, and as thin as coarse paper where the rent occurred.

*Case VI.* This woman was the mother of two children, both born alive after ordinary labour. In this, her third labour, I had always suspected the injudicious use of the ergot of rye, as her attendant was a rash and impulsive man, yet he denied having given it. The rupture in this case was at the fundus, followed by the partial escape of the child into the abdomen together with the placenta. The child was delivered by the forceps, the placenta removed, and the woman ultimately recovered. Within two years she gave birth to a living child without accident of any kind.

*Case VII.* I attended this young woman in her first three confinements, and, after the first, discovered a fibrous tumour of the uterus the size of a goose's egg. After the second it had increased to double its former size, and on the third occasion it was fully as large as the fœtal head. She removed to the country, and have not seen her since; but I heard from her husband that she had died in her fourth confinement from rupture of the uterus.

From the changes which have been observed to take place from the long continued pressure of a large tumour, we may safely infer that this young woman perished from the thinning which the uterus had undergone from the pressure of the tumour.

*Case VIII.* occurred at the lying-in-hospital during my temporary absence from Toronto. There was slight contraction of the pelvis at the brim; violent action of the uterus, when suddenly the uterus gave way, the child escaped into the abdominal cavity, and the woman died undelivered in a very short time.

In this case there is no reason to suppose that the uterus was in a diseased condition at least prior to the commencement of labour.

*Case IX.* The ninth and last case is that which I have published in full, and it completes the cases of rupture which have come within my knowledge since the publication of Dr. Trask's valuable monograph.

In conclusion I may state that numerous causes have been assigned for rupture of the uterus, and amongst the more common or frequent causes given by those authors who have written on the subject are, contraction of the pelvis, large size and firmly ossified fœtal head, softening and thinning of the uterus. The mal-position of the head or trunk of the child, The insuperable rigidity of the cervix uteri. Previous incisions in the womb as for the cæsarian section. Other diseased conditions of the uterus than thinning, &c., such as cancer, polypus, &c., and lastly, uterine action, either natural or induced by the ergot of rye or other stimulants.

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# PERISCOPIC DEPARTMENT.

## Surgery.

### RESECTION OF THE ANKLE—RECOVERY WITH THREE-FOURTHS OF AN INCH SHORTENING.

By Dr. John G. Johnson.

In this age of conservative surgery, when resections are so much in favour, when operations upon the largest articulations can be found in numbers in almost every periodical, those upon the ankle-joint seem strangely few. The hip, knee and elbow are the favourite articulations for resection; while at the ankle, even when the disease is confined to the joint itself, or its immediate neighbourhood, Syme's or Pirogoff's operations are resorted to, and the healthy foot sacrificed. So rare has been this operation at the ankle that Mr. Henry Hancock, senior surgeon to the Charing Cross Hospital, in an article in Braithwaite's Retrospect for January, 1860, states "the operation was first performed by Moran, and subsequently by Jager and others abroad; but I believe that I am justified in stating that with the exception of those which I have done myself, there is not a single instance upon record in which excision of the ankle-joint has been performed in this country for disease." In the English journals, I have not found other cases than those reported by Mr. Hancock, and in our own medical literature there is the same absence of cases. Why the solitary exception should be made of the ankle-joint—and the healthy foot sacrificed, I am at a loss to understand. In both Syme's and Pirogoff's operations, in addition to the loss of the foot,

there is the danger of sloughing of the flaps, and of bagging of the pus, which danger does not exist in resection of the joint. In my own practice, an opportunity offered for an operation of this kind, though in a patient constitutionally unfavorable, and the result has been so satisfactory to the patient and surgeon, that it may not be devoid of interest to the profession. On the 26th of January, 1862, I was called to see Mr. J. C., a merchant about 45 years of age, who had received a severe injury by falling on the ice. On my arrival, I obtained the following history of the case: He was walking on the sidewalk, when he stepped on a spot of glare ice, which was concealed by a slight fall of snow; his foot slipped from under him, and he fell, twisting it outward. Endeavouring to rise, he again slipped, and wrenched the foot more violently than before. I saw Mr. C. about half an hour after the receipt of the injury. The foot was dislocated strongly outwards—the gastrocnemius muscle was exceedingly tense, reflex action being already aroused. On examination the malleolus internus was found to be fractured, and also the fibula, about three inches from its lower extremity, the astragalus was rotated laterally so as to bring the outer articulating surface of the tibia to rise on the inner surface of the astragalus. Reduction of the dislocation was found to be a work of some difficulty from the powerful tension of the muscles of the calf of the leg, now aroused to violent spasmodic action. The leg was flexed to right angles with the thigh to relax these muscles as far as possible, and with gentle, steady traction, the foot was drawn down and reduction accomplished.

The reflex action was so strong that it was deemed best to keep the limb flexed on the thigh to relieve the tension of the extensor muscles; accordingly the limb was placed upon the double inclined plane, with the coaptation side splints and pads evenly arranged so as to give firm support to the side of the foot, and to obviate the danger of re-dislocation. The limb hardly had been thus dressed when it was re-dislocated with great violence, completely overturning the splint.

This reflex action becoming so violent, it was determined to place the patient's leg in a fracture box, with the leg completely padded with bran in every direction, covering over the top of the leg for a couple of inches, so that the limb could not be thrown out of place by any violent action. This was absolutely necessary, as the sharped and jagged edge of the tibia, where the internal maleolus was broken off, was crowding firmly against the distended integuments, threatening to lay open the joint. The fracture box was then swung so that whatever motion the patient might take, the limb would rotate without displacement. As the patient had been accustomed to the free use of alcholic stimuli, a good allow-

ance of whiskey, with a strong anodyne, was given, but the patient had an uncomfortable night. The next morning the limb was swollen, with much discoloration; his nervous system began to give evidences of participating in the local trouble; there was a tremulousness about his hands, his tongue was covered with a yellowish white fur and tremulous, his pulse was irritable and rapid. Although anodynes and stimulants were largely used, these produced but little satisfactory results. The naps that he obtained were not refreshing or perfect, and he would start from apparent sleep with a shriek that could be heard for some distance; and when aroused, he would complain of most intense pain in the limb. As it was evident that the patient would have a severe attack of mania-a-potu, and that the injury was a source of intense pain to him, partially kept under control by anodynes, counsel was requested, and I had the pleasure of receiving the advice of my instructor and friend, Dr. James R. Wood. On the doctor's arrival, and my description of the injuries, he desired to examine the injury for himself. My experience of the previous night did not made me anxious to again attempt a reduction of the limb, and I did not urge an examination. Upon removing the bran from the top of the leg, the limb began to twitch spasmodically and the patient to shriek with the intense pain. The side of the fracture box was hardly loosened, before the limb was thrown out with great violence, and puncture of the integuments from the projecting jagged edge of the tibia seemed inevitable. The steady efforts of four strong men, under the able direction of Dr. Wood, were unable to reduce the dislocation. Choloroform was administered, and the limb reduced; when the effects of the choloroform passed off, the dislocation again occurred, notwithstanding the endeavours of Dr. W. and myself to prevent it. The only way of obviating this violent action of the extensors, was to divide the tendo-Achillis, which Dr. W. proposed, and it was accordingly performed. The limb was then replaced in the fracture box, and water dressings applied. Dr. Wood remarked that he had never witnessed so powerful reflex action. Notwithstanding the division of the tendo-Achillis, the patient continued to complain of intense pain in the joint, returning in paroxysms of increasing severity.

Violent delirium followed, which the prodigal use of opiates could not control. The next morning vesications on the inner aspect of the limb showed that sloughing would ensue. and the patient was stimulated freely and the limb dressed with yeast poultices, to limit the gangrene as much as possible. The joint was, however, laid open by the progressive process of the disease, violent erysipelatous action accompanying it, running up the leg and side of the body; sympathetic buboes formed in the groin,

and it seemed probable that the patient would succumb to the violence of the constitutional disturbance. As soon as the joint was laid open by the progress of the sloughing, a careful exploration was made with the finger, which revealed the hidden source of irritation. Within the joint were found several sharp spiculæ of bone, which had created the intense irritation, producing the violent reflex action which had become so early and so powerfully marked. When a limb is allowed to remain for some time with the dislocation unreduced, and the parts become irritated by the non-adjustment, it is not at all uncommon to have reflex action excited, which is rendered difficult to control; but in this case, where the cause of the injury was so slight, and the dislocation had been reduced so soon, the violent reflex action was a source of considerable mystery. As irritation within the joint was removed, the intense spasmodic pain became relieved; the inflammatory action had, however involved the periosteum, and large abscesses formed on the anterior and lateral aspects of the tibia—opening these the bone was found necrosed. As the inflammatory action subsided, the prospects of saving the limb seemed so dubious, that amputation was advised by the surgeons who saw the case in consultation. On the anterior portion of the tibia, even so high up as within three inches of the head of the tibia necrosed bone could be felt, and the exhausting suppuration was reducing the patient's strength. My strong preference in favor of exsecting the joint finally prevailed, backed as it was by the argument that amputation could be easily performed if the exsection was not satisfactory, but that we could not so easily replace the limb after amputation, if from any reason we should find it desirable.

The method of operating was extremely simple, and for the main feature of it I willingly acknowledge my indebtedness to Dr. Wood. The malleolus and lower extremity of the tibia had become carious. The opening from the slough was enlarged by a straight incision along the inside of the tibia. The tibia was examined till it was found sound. A strong curved needle was then carried round, closely hugging the tibia, and out through the original opening. A thread was thus drawn around the tibia, to which a chain saw was attached, and by this means the bone was easily divided at the point previously determined upon.

The exsection was completed by dividing the ligaments left, after the slough: as there was no union of the fibula at the point of fracture, and the lower fragment was healthy, it was not interfered with; the interosseous, as well as the anterior and posterior ligaments, having been torn by the previous violent reflex action, there was no difficulty in carrying the foot up so that the astragalus should be kept in coaptation with the

lower end of the tibia. Neither the anterior nor posterior tibial arteries or nerves had been interfered with in the operation, so that proper nutrition of the foot was provided for. The astragalus was examined and found not to be diseased; where the cartilage was involved it was removed, otherwise it was not interfered with. In the feeble condition of the patient, it was not considered judicious to keep him longer under the influence of chloroform; accordingly the gouging off the necrosed portions of the tibia, higher up, was postponed. The limb was replaced in the fracture box, and water dressings applied. Profuse suppuration followed, but it was no longer of the intensely fœtid character of the previous discharge. The patient's improvement in general health was marked; the drain of laudable pus from the system did not produce the constitutional disturbance that the previous unhealthy discharge had. The patient progressed most favourably, with no features of unusual character. Slight portions of bone exfoliated at the points where the old abscesses had formed. About the 1st June, the union was sufficiently firm to allow the patient to move on crutches. He can now walk with only a slight halt, and the limb is far more serviceable than any artificial one could be.

The case was an unfavourable one for operation, from the previous habits of the patient, and from the prostration of the system by the violent constitutional disturbance produced by the spiculæ of bone within the joint, producing caries. The result is more satisfactory than any other operation that could have been performed, and I place it upon record, in the hope that, at the present time, when injuries of articulations are so common, surgeons of eminence may turn their attention to this neglected field, and the saving of a part so important as the foot may be accomplished, where it is now sacrificed.—*Buffalo Medical Journal, Jan.*, 1865.

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## A CASE OF TREPHINING WITH GOOD RESULT.

Operation by Ass't. Surg. Theodore Artaud, U. S. V.

Private P. W., Fiftieth Reg't., Pen. Vol., was wounded July 30th, 1864, at the battle of Petersburg, by a spent minie ball imbedding itself in the integument and muscle of the left side of the head, (from which it was soon removed by the hand,) causing a fracture and depressing a portion of the skull a little above and to the left of the occipital protuberance.

The patient says he was stunned by the blow at the time, but arose and walked to the field hospital, when he became unconscious and remained so for eighteen hours. The next day he left for his regiment, not knowing his difficulty was so severe. He was then returned to the hospital, where

he remained for one week. During this time the headache was severe, and the patient was unable to see or hear well.

August 11th, 1864, he was admitted to the Soldiers' Rest Hospital, Alexandria, Va., and was unable to walk to his bed. He seemed to improve for two days, then grew worse; suffered pain through the frontal region of the head, especially over left orbital ridge; and on the sixteenth was unconscious for about two hours. It was then, after consideration, deemed advisable to remove the depressed portion of bone. The patient was brought on the table, ether was given, and after shaving off the hair, a conical incision was made directly over the injury; size, one-half inch, and the occipito-frontalis muscle was dissected up, showing that the skull was indented half an inch, making a very regular and cupped-shaped depression three-quarters of an inch in diameter, and showing a slight crack around its edge, and an irregular one across its centre. The trephine was applied, partially covering one side of the depression, and a portion of the skull removed; depressed portions were removed, by the elevator exposing the dura mater, which was found to be healthy. A circular tent was applied over the exposed portion of the brain, and the wound dressed with cold water dressings. Morphia was given to quiet the patient.

August 17th. Treatment continued, porter given, patient sitting up.

August 20th, same dressings; ext. hyoscyami gr. j. at night; walking about.

August 26th. The patient was seized with violent signs of temporary congestion or compression. This was relieved by sinapisms to the neck, abdomen, and extremities. Ol. tiglii. gtt.ss. was given, and afterw ard the wound, which had nearly healed, was enlarged and kept open with tents, for three days, with but slight inconvenience to the patient.

September 1st, slight headache in the morning, condition good and improving; rests well; good appetite.

September 10th, seems to be growing stronger, rests well at night; appetite good.

September 22nd, the wound has now entirely closed; the patient complains occasionally of a slight headache due probably to malarial influences, his appetite and general condition is good and he is to all appearance cured.

The interesting features of this case are the long time between the injury and the operation, and yet no disease of the membranes, and the complete success of the operation.

## EXCISION OF THE HIP-JOINT.

Mr. Holmes exhibited to the Western Medical and Surgical Society, two children—one a boy of seven years of age, the other a girl of ten years—in whom he had excised the hip-joint in the course of the present year, and a dissection from another successful case in which the child had died a few months after the operation of inflammation of the lung accidentally contracted. The latter preparation had been exhibited at the Pathological Society, and will be found more fully described in the 14th vol. of their "Transactions." Mr. Holmes remarked that his object in this communication was rather to show what the results of successful excision of this joint are, than to discuss the general question of the propriety of the operation; he, therefore, merely dwelt so far on the latter subject as to insist that there are conditions for which excision holds out a prospect of cure where natural cure is hopeless, and in those cases the time required for recovery after operation is far less than that required for natural cure, while the joint which is left by it is more useful. In the case of the boy, there had been extensive abscess reaching nearly to the knee, and the child was rapidly sinking under the profuse suppuration at the time of the operation, which was performed in February last. At the operation the femur was divided from the trochanter, and the acetabulum, which was ulcerated, was scraped out. Recovery was comparatively speedy. The boy had been going about for some time, and has lately been walking on a high boot. All the wounds have long been soundly healed; there is motion in every direction; he can walk with a slight limp for a considerable distance, and his gait is daily improving as he becomes more accustomed to his boot; the shortening is about one inch and a-half. In the other case, that of the girl, there was a great distortion at the time of the operation, much shortening, and very loud crepitation on rotating the limb. The head of the femur was lying loose in the joint, and the surface of the remaining part of the femur was ulcerated; consequently a natural cure was impossible. The acetabulum was healthy. The recovery was rapid, the operation having been performed in June, and the child having been about now for some weeks. It is only very lately, however, that she has been fitted with a high boot, so that she walks awkwardly as yet. The shortening also is greater than in the former case—about two inches,—but the range of motion is equally extensive. Most probably in both these cases the same state of things exist as in the dissected preparation, where the end of the femur is seen drawn up into the joint by the common tendon, and united to the acetabulum by numerous bands of adhesion, allowing free motion in all

directions. A perfect capsule of fibrous tissue surrounded this new articulation.

In reply to a question, Mr. Holmes said that he had never performed the operation except when there was abscess and loud crepitus on pressing the joint surfaces together.

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# Medicine.

## ON TRACHEOTOMY IN DIPHTHERIA.

By George Buchanan, A.M., M.D., Surgeon to the Glasgow Royal Infirmary, and Lecturer on Anatomy.

In some papers on this subject I have called attention to the two modes in which Diphtheria proves fatal. In one class of cases the death is from asthenia, in another from apnœa. In those in which the patient sinks from debility, the surgeon is unable to ward off the fatal result; in the other, when suffocation is imminent from extension of the diphtheritic exudation into the larynx and trachea, then tracheotomy will prevent the impending death, and in many cases give time for the patient to recover from the disease. While always willing to admit that at certain stages of *croup* tracheotomy was admissible, I was at first a partaker of the wide-spread opinion that it was not practicable in diphtheria; but experience has shown me that that it is quite as applicable to these cases of diphtheria to which I have just alluded, as it is to cases of croup.

I have elsewhere published the result of fifteen cases with five recoveries; I now report other six operations, with two recoveries. Such operations require a large number of cases to make the statistics of any avail, but I have always held that this is not an operation to be effected by figures. The question is, "Can tracheotomy save the lives of any children after medical treatment has proved unavailing?" That it has done so is manifest, and the only other point to which I desire to draw the attention of the profession is, to have recourse to the surgical means somewhat earlier in the progress of the case than has hitherto been done. When remedial measures have failed, and when the disease is still extending, then the surgeon should interfere before the strength has been reduced by the ineffectual struggles of the patient to obtain air through the obstructed air-passage. The following cases are illustrations of the results of tracheotomy in diphtheria:—

*Case* XVI.—On the 1st February, 1864, Dr, Chalmers requested me to visit, with him, the child of Mr.——, a little girl, aged 5½ years.

She had been ailing about a week, but Dr. Chalmers had not been called till four days after the onset of the disease, when he found her suffering from diphtheria. Mustard was applied to the throat and back, and ipecacuanha wine administered. The disease, however, continued to progress, and on the day named I found her in great distress from obstructed respiration. The exudation had evidently extended into the larynx. I at once performed tracheotomy, and gave her instant relief. She bore the tube very well, and rested well at night. Next day she took beef tea and milk, and was much better. She continued to improve for four days, when, as the tube seemed to give her some annoyance, I removed it, and left her breathing quietly. During the night, however, a severe fit of choking came on, and she had difficulty in breathing, for a considerable time. On the fifth day the respiration became more obstructed, and she was wearied out and died at mid-day.

*Case* XVII.—T. C., aged 6 years was seized with symptoms of diphtheria on the 7th February, 1864. Patches of white exudation were visible on the tonsils and fauces. He was treated, under Dr. Drummond, by inhalation of steam, application of hot fomentations. and by the administration of chlorate of potash. On the 11th, the disease had extended to the larynx, and the patient was then placed under my care. He was removed to a private room in the Infirmary, in order that he might be under the immediate care of my assistant and dressers. On admission at 2 p.m., the respiration was hurried, difficult, and stridulous; the face flushed; pulse 120, full. As his strength was good I ordered an emetic of ipecacuanha, to be followed by repeated doses of iodide of potassium. At 6 p.m., the breathing was more impeded, but the pulse was still good. The emetic was repeated. At 9 p.m., the dyspnœa was so urgent, and the spasmodic stridor so much increased, that the face became almost livid; and in a paroxysm the patient sprang out of bed and appeared on the point of suffocation. I at once decided on performing tracheotomy. The operation was accomplished with great difficulty, owing to struggles and the occurrence of several spasms. The neck was very vascular, and there was considerable hemorrhage from a distended skin, which I secured before opening the trachea. The tube, however, was safely introduced, when the struggles at once ceased, and the breathing became tranquil. A large quantity of tough exudation was coughed up, and pulled out of the wound, after which the air-passage seemed completely clear of obstruction.

On the 12th and 13th he was remarkably well, but on the 14th he was feverish, with a white tongue and rapid pulse. On the 15th his skin was covered with a bright eruption of scarlatina; but he was more

comfortable since the eruption appeared. On the 17th he was progressing favourably; and as all uneasiness connected with the tube had gone off, the latter was removed without any bad consequences. On the 25th the wound was nearly closed, and the patient could speak and whistle. Next day he was allowed to go into the ward; but he caught cold, and general anasarca made its appearance. He was again confined to bed, and kept warm with plenty of blankets; and the heat of the room was raised. He got occasional doses of castor oil; and in a few days the anasarca began to disappear. On the 19th of March he was dismissed cured.

This case is peculiarly interesting from the occurrence of scarlatina and then anasarca to complete the operation, and would lead one to believe that the existence of scarlatina, at least in a mild form, ought not to be considered a contra-indication to tracheotomy, if it should supervene upon an attack of croup or diphtheria.

*Case* XVIII.—W. R., aged 3 years began to show signs of being ill for some days before medical assistance was called for. On the 18th March, 1864, Dr. Cassells was asked to attend, when he found the whole back part of the mouth covered with diphtheritic exudation. The treatment consisted in supporting the strength, and the use of chlorate of potash and dilute mineral acids. The patient continued to improve a little each day till the 22nd, when the larynx was evidently invaded. Treatment was continued for twenty-four hours longer; but on the evening of the 23rd the obstruction to respiration became so great that I was sent for. I found marked evidence of considerable laryngeal and tracheal effusion. The stridor was continuous, and the agony great; the face was cold, and the lips bluish. I at once performed tracheotomy, with the most marked relief to all the symptoms. The tube was introduced; and, as usual in these cases, the child fell asleep in half an hour after the operation. Every thing went on satisfactorily; so that on the evening of the 27th I removed the tube, and left him breathing quietly through the wound and mouth. The next morning he was quite well and lively, was playing about the bed, and took breakfast with great relish. About mid-day while running about the room, he said he felt a choking feeling, and became very pale. Dr. Cassells, who happened to be in the vicinity, was called at once, and on his arrival found the child on the point of death. Indeed he died a minute afterwards. The wound seemed free from obstruction, and the exudation had altogether disappeared from the fauces. The cause of death was not ascertained.

*Case* XIX.—Esther W., aged 3½ years, complained of sore throat on the 24th March. Dr. Greenlees, who was called, at once perceived it

was a case of diphtheria, and treated it accordingly. The stages of the disease were so rapid, that by midnight the larynx was affected, and, suffocation seeming imminent, I was sent for. By the time I arrived it was plain that there must be no delay, as the poor child was suffering severely. The pulse was not so strong as could be desired, and the face was cold and puffy; still it was so early in the disease I did not hesitate to perform tracheotomy. The relief was instant, and next morning the child was very well. There was at first some difficulty in getting her to take nourishment, this however, was soon overcome, and she took milk, beef tea, and wine with relish. Matters continued to go on nicely for five or six days; but on the morning of the 31st, the breathing became more laboured, and the face got flushed—signs of fresh obstruction further down than the opening. I had retained the tube in the tracheal opening the whole time, fearing what had now occurred. By the evening the symptoms became more distressing; and the little patient died, worn out, on the seventh day after the operation.

*Case* XX.—On the first April, 1864, I was called to see E. T., aged two years. He had been attended by Dr. M'Millan since the 27th March. Iodide of potassium, in frequently repeated doses, had been prescribed, also emetics of ipecacuanha. The symptoms amended for a few days, but on the 1st April it was evident that the exudation had extended into the larynx. When I saw the child it seemed to be suffering chiefly from the dyspnœa, but in the intervals of the paroxysms it was quiet, and rather weak. The duration of the disease was rather unfavourable to its strength, but, judging from the vigour with which he rose up and swallowed milk and other fluids, I determined to operate. The struggles of the boy during the operative procedure rendered it rather tedious, but nothing could be more gratifying to myself, as well as to the parents, than the perfect quiet which followed the introduction of the tube. The little patient got on nicely for four days; but on the morning of the fifth, it was evident that the symptoms were returning. Unable to stand against a renewal of the disease after the previous exhaustion, he gradually sunk, and died on the fifth day after the operation.

*Case* XXI.—On the 19th July, 1864, Dr. Renfrew requested my opinion in the case of A. M'D., aged 2½ years, who had been suffering from diphtheria for a week previously. The child had been ailing for two or three days before Dr. Renfrew was called in. On the 17th it was evidently a case of well-marked diphtheria, but the exudation seemed at first confined to the fauces. Notwithstanding every care, and as faithful an application of remedies as could be obtained in so young a

child, the disease continued to advance, and on the morning of the 19th the breathing became obstructed. When I saw the little girl she was suffering very markedly from laryngeal obstruction, the exudation having plainly extended into the air-passages. The parents were informed of the imminency of the danger, and at once consented to the performance of the operation. As usual the lodgment of the tube in the trachea was the occasion of instant relief, and, before I left the house the child was asleep, breathing quietly. Her progress to cure was uninterrupted. She rapidly got stronger, and could sit up and take food. I left the tube in till the seventh day, when I removed it without any trouble to the child. She made a rapid and perfect recovery.

I have performed tracheotomy twenty-one times with the result of seven recoveries; and if it be remembered that the patients were all on the point of death from suffocation, it cannot but be regarded as an encouragement to the surgeon to endeavour to save life by operative interference in the latter stages of this most fatal disease.

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*Diabetes.*—The patient, a young, delicate-looking, and slightly-built man, was admitted in the Charing Cross Hospital in the month of November last, had been passing seventeen pints of water a day, the specific gravity of which was 1·040; after a time, and under treatment, the quantity evacuated in the day was reduced to ten pints and a half, and to a specific gravity of 1·032.

The first treatment under which he had been placed was that called the alkaline, opium being at the same time given. There was no good result.

The second kind of treatment adopted was that by means of quinine, creasote, and opium; next, was tried a combination of quinine, strychnia and opium. From this last some benefit was derived. At present the treatment consisted in giving the patient the muriated tincture of iron, internally, and in allowing him for food such articles of diet and drink as were not convertible into sugar, or were not otherwise prejudicial.

Brandy was permitted, but in such a regulated quantity that it could not possibly act as irritant upon the kidneys; not because any injury was apprehended to these organs, but in order to prevent any diuretic action by which more urine than was being daily expelled should be eliminated.

Greens, fresh meat, fish, brown or bran bread, and such like articles, were given to the patient each day, and since his admission he seemed to have improved.—*Medical Circular, Feby. 15th*, 1864.

# Canada Medical Journal.

MONTREAL, MARCH, 1865.

## CLINICAL STUDY.

Within the past twelve years, the improvements that have taken place in our medical schools and colleges, in the method of instruction, have been such as to commend them to the good, plain common sense of those who, twenty years ago, studied their profession under disadvantages, which at the present day do not exist. Yet that we have reached a point, beyond which it is impossible to improve, will be hardly claimed by any. The rapid growth of all our Canadian Medical schools demands that at each and all, the student shall have presented to him, the details of his profession in the manner best fitted to make a lasting impression upon his mind. Some students have a memory so retentive as to be able to retain the substance of the greater portion of the lectures; yet that the majority are so blessed will be denied by every one who is at all acquainted with the subject. As to the propriety of regular and continued daily lectures, it is not our intention to allude, though we may mention that this subject has lately engaged the attention of eminent men in the mother country. Of clinical lectures and on the subject of clinical study, it is our intention to write a few lines. Its importance has only been properly understood within the past few years; and the prominent position given to clinical chairs in the older schools of Europe has secured to them a class of men, such as Syme, Bennett, Laycock, and others. On this continent, however, as a rule, we fear the clinical chairs are looked upon as of only secondary importance, and many who would think themselves guilty of a gross dereliction of duty were they to miss any of their regular lectures, have no compunction to escape, not once, but often, those termed clinical. Are these lectures really clinical, or has there not been, and is there not still a tendency to make them what they should never become—systematic? Of this class, we feel certain, the student has quite enough already. At all our Canadian schools we know that an honest attempt is being made to give the student instruction (truly clinical) at the bedside of the patient; and that all hospital physicians,

themselves, aware of its great importance, have turned clinical teachers to such students as follow them in their daily hospital visits. And to this fact we attribute the greater excellence and practical bearing of the theses presented by intending graduates, within the past few years at the University of McGill College of this city, as was mentioned by the worthy Dean of the Faculty, at the two last annual convocations. According to our idea, what are termed clinical lectures, should never be purely systematic —by this we mean that the Professor should never take up one particular class of diseases or accidents, and follow them *seriatim*, as is done at all Colleges by the Professor of Principles and Practice of Medicine and Surgery. It then becomes to the student a mere repetition, illustrated, perhaps, at times by cases, but as often not; and the student, who neglects his daily attendance at the bedside, feeling that his clinical lectures, delivered twice a week are all that is really demanded, is apt to find out, when too late, that he has neglected the most important and practical portion of his professional education. The London *Lancet*, some months ago, writing on a somewhat similar subject, says, "It may be a question whether we ought not to discard formal so called clinical lectures altogether. They are very liable to degenerate more or less into systematic lectures, of which the student has already too many, and they lead to the neglect of the bedside instruction." This we heartily endorse, so far as raising our voice against the continuance of *systematic* clinical lectures; but in addition to bedside instruction, given now by almost all hospital physicians, as well as clinical professors, we would have the latter give his clinical instruction on lecture days, after the method followed by Professor Syme of Edinburgh, and which has been adopted by him for more than thirty years; it will be better understood by the following extract from a letter from Professor Syme, dated September, 1864.

"The plan, therefore, which I introduced into the Edinburgh school thirty-five years ago, and still pursue, appears to me much preferable, and worthy of general adoption. This is to bring the cases, one by one, into a room where the students are comfortably seated, and if the patients have not been seen previously by the surgeon, so much the better; then ascertain the seat and nature of their complaints, and point out the distinctive characters. Having done this, so that every one present knows distinctly the case under consideration, the teacher, either in the presence or absence of the patient, according to circumstances, proceeds to explain the principles of treatment, with his reasons for choosing the method preferred, and lastly, does what is requisite in the presence of his pupils.

The great advantage of this system is that it makes an impression at the same time on the eye and ear, which is known from experience to be more indelible than any other, and thus conveys instruction of the most lasting character. Every season I have from a dozen to twenty of my old pupils, who, having been employed for many years in the public service, and not unfrequently attained the highest rank, yet attend the whole course without missing a lecture, and often bring to my recollection cases seen or remarks heard long before the bulk of the class were born. I may add that the Edinburgh College of Surgeons in their curriculum of study have wisely taken a second course of clinical surgery, instead of a second systematic course at option of the student; so that, instead of hearing the same story told over again, not always in the most lively manner, he may read his book and store his mind with valuable facts for future guidance and practice."

A somewhat similar plan was followed by the late Dr. Bell, a few years ago, one of the Clinical professors at the Glasgow Royal Infirmary; and no one who has followed a course by either of these eminent men, but will have been forcibly struck with the vastly preponderating superiority of their method of imparting instruction, over that followed as a rule in this country. We would especially speak in the highest terms of the lectures of Professor Syme as being calculated to impress in the most lasting manner all that falls from his lips, upon the mind of the student. In the course of one lecture, Mr. Syme will examine half a dozen cases, just such as happen to present themselves; but every word that he utters is of practical value to the student. How completely at sea, does not the practitioner often find himself, who has neglected bedside instruction, when he has but barely crossed the threshold of his professional career. To the same extent this could not be the case, were the clinical lectures delivered after the method we have mentioned. At some of the examining Boards in the mother country, a bedside examination forms a portion of the test for the diploma, and we happen to know that the very highest importance is attached to this part of the examination. In truth we live in a practical age, and the more practical the methods followed in imparting instruction in medicine are, the more thoroughly grounded in practical experience will the practitioner be, when he leaves the lecture room of his *alma mater*, carrying with him his certificate of qualification. For our part we are convinced the more attention the student gives to walking the wards of an hospital, and closely watching what falls under his observation, the better will he find himself qualified to battle with disease in its various forms; hence, we would compel every student to attend hospital practice for three six

months instead of two, as is the case, we believe, at all our Canadian schools. At Edinburgh, the College of Surgeons have altered their curriculum of study, so that the student now is *obliged* to take two courses of clinical surgery, insted of leaving it to his option whether his second course should be clinical or systematic surgery. The clinical courses in Edinburgh or Glasgow are of six months' duration, and we think it would not be erring, were we to make our clinical courses in Canada to correspond. These remarks, we would observe in conclusion, have no personal application; we know the clinical professors in all our colleges have the welfare of the student at heart,—that they enthusiastically labour in their particular sphere, and that there may be some difficulties in the way of entirely adopting the method of the Scotch school, but by aiming at perfection—in time it may be attained. Some may not agree with us: we cannot expect that every one will hold opinions like our own. While we fully admit their right to theirs, we trust they will give to us an equal liberty, and believe that we have but one object, in this article—to advance the position of the student, and thus elevate the profession in Canada.

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## QUARTERLY REPORT OF THE MONTREAL GENERAL HOSPITAL FOR THE QUARTER ENDING 31ST JANUARY, 1865.

| | | | |
|---|---|---|---|
| Number of patients remaining from last quarter | 110 | Died during quarter | 17 |
| Admitted during present quarter | 282 | Now in hospital | 110 |
| | | Discharged | 265 |
| Total | 392 | Total | 392 |

| *Indoor Patients.* | | *Outdoor Patients.* | |
|---|---|---|---|
| Females | 125 | Females | 1012 |
| Males | 157 | Males | 686 |
| Total | 282 | Total | 1698 |
| Roman Catholics | 145 | Roman Catholics | 1339 |
| Protestants | 127 | Protestants | 309 |
| Total | 282 | Total | 1698 |
| Residents | 207 | Residents | 1661 |
| Strangers | 16 | Strangers | 31 |
| Sailors | 5 | Sailors | 3 |
| Emigrants | 4 | Emigrants | 3 |
| Total | 282 | Total | 1698 |
| Natives of Denmark | 1 | Natives of Canada | 1041 |
| " Canada | 104 | " England | 83 |

| *Indoor Patients.* | | *Outdoor Patients.* | |
|---|---|---|---|
| Natives of England | 34 | Natives of France | 3 |
| " Germany | 4 | " Germany | 25 |
| " Ireland | 113 | " Ireland | 460 |
| " Norway | 1 | " Nova Scotia | 4 |
| " Nova Scotia | 2 | " New Brunswick | 1 |
| " Poland | 1 | " Scotland | 30 |
| " Scotland | 16 | " Switzerland | 4 |
| " Switzerland | 1 | " United States | 41 |
| " Sweden | 2 | " West Indies | 6 |
| " United States | 3 | | |
| Total | 282 | Total | 1698 |

In addition to the deaths above enumerated there were three which occurred within three days after admission, making the total number of deaths twenty, and of admissions 285.

DISEASES, ACCIDENTS, &C.

| Diseases, &c. | Admitted. | Died. | Diseases, &c. | Admitted. | Died. | Diseases, &c. | Admitted. | Died. |
|---|---|---|---|---|---|---|---|---|
| Abscessus | 7 | .. | Epilepsy | 1 | .. | Ophthalmiæ var | 9 | .. |
| Abortio | 1 | .. | Ecthyma | 3 | .. | Ostitis Ch | 2 | .. |
| Amaurosis | 2 | .. | Epithelioma | 1 | .. | Onychia | 1 | .. |
| Amputatio | 2 | .. | Ebriositas | 1 | .. | Ovaritis | 1 | .. |
| Amenorrhœa | 2 | .. | Febricula | 6 | .. | Phthisis | 15 | 5 |
| Arthritis Rh. Ch | 1 | .. | Febris intermit. | 1 | .. | Pneumonia | 5 | .. |
| Anasarca | 1 | .. | " Typhoid | 2 | 2 | Pustula Malig. | 1 | .. |
| Ascarides | 1 | .. | Fractura cubiti | 1 | .. | Palatum fissum | 1 | .. |
| Anemia | 2 | .. | " Cruris | 4 | .. | Rheumat. Ch. | 5 | .. |
| Adenitis | 1 | .. | " Scapulœ | 1 | .. | " Acut | 3 | .. |
| Anthrax | 1 | .. | " Clavic | 2 | .. | Rubeola | 7 | .. |
| Bubo | 2 | .. | " Fibulæ | 2 | .. | Scabies | 6 | .. |
| Bronchitis, Ac. | 6 | .. | " Cranii comp | 1 | 1 | Syphilis prim. | 19 | .. |
| " Chron | 6 | .. | Furunculus | 2 | .. | " Consec | 6 | .. |
| Contusio | 6 | .. | Gonorrhœa | 2 | .. | Synovitis Ac. | 2 | .. |
| Cystitis | 1 | .. | Gelatio | 5 | .. | Sciatica | 1 | .. |
| Chlorosis | 1 | .. | Glossitis | 1 | .. | Struma | 1 | .. |
| Carcinoma | 1 | 2 | Hœmorrhoid | 1 | .. | Strict. os uteri | 1 | .. |
| Concussio Cereb | 2 | .. | Hemiplegia | 2 | .. | " Urethræ | 2 | .. |
| Cataract | 2 | .. | Hysteria | 1 | .. | Scarlatina | 1 | .. |
| Debilitas | 23 | .. | Hernia | 2 | .. | Subluxatio | 2 | .. |
| Del-tremens | 6 | 1 | Icterus | 1 | .. | Tumour | 2 | .. |
| Diarrhœa | 1 | .. | Laryngitis Ac. | 1 | .. | " Uteri | 1 | 1 |
| Diabetes mel | 1 | .. | Luxatio femoris | 1 | .. | " Ovarii | 1 | .. |
| Dyspepsia | 1 | .. | Morbus Cordis | 2 | 1 | Tormina | 1 | .. |
| Epistaxis | 1 | .. | " Coxæ | 2 | .. | Tinea Capitis | 1 | .. |
| Emphysema pulm | 1 | .. | Meningitis Spinal | 1 | .. | Tonsilitis | 2 | .. |
| Eczema | 2 | .. | Mastitis | 1 | .. | Ulcus | 12 | .. |
| Erysipelas | 3 | .. | Orchitis | 1 | .. | Variola | 29 | 4 |
| | | | | | | Vulnus | 3 | .. |
| | | | | | | Total | 282 | 17 |

OPERATIONS, &C., DURING THE QUARTER.

*Major Operations.*

Amputation of thigh, 1 ; For femoral hernia, 1 ; Trephining, 1. Total 3.

*Minor Operations.*

Hydroceles tapped, 1 ; Excision of Cysts, 2 ; Tenotomy, 2 ; Teeth extracted, 86 ; Incisions, 44 ; wounds dressed, 63 ; Cuppings, 14 ; Pterygium removed, 2 ; For Hypospadion, 1 ; Amputation of fingers, 2 ; Epithelioma removed 1 ; Knee-joints tapped, 1 ; Sequestra removed, 2 ; Actual Cautery applied, 1 ; For Strabismus, 1 ; Fistula in Ano, 1. Total 226.

*Dislocations reduced.*

| *In door.* | *Out door.* |
|---|---|
| Of Femur on dorsum ilei, 1. | Of Humerus in axilla, 1. |

*Fractures Treated.*

| *In door.* | | *Out door.* | |
|---|---|---|---|
| Simple..... | 10 | Fracture Radii ..... | 1 |
| Compound..... | 1 | | |

Total number of operations during quarter..... 243

*Attending Physicians.*—Dr. MacCallum and Dr. Fenwick.

J. M. DRAKE, M.D.
House Surgeon, M.G.H.

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## DEATH OF DR. DOWIE.

Another medical practitioner has fallen a victim to the epidemic at present raging in this town. Dr. Dowie, we regret to say, died on the 2nd February, at the early age of 22 years, death resulting from typhus fever. Deceased was the son of Mr. E. T. Dowie, surgeon dentist, and had only commenced practice in town a few weeks ago. The fatal disease which cut him off thus early was contracted in the laborious discharge of his duties, to his fever stricken patients. The deceased gave every promise of being an ornament to the profession; and his early death has cast a gloom over the entire community. Only two days previous to his death, he was appointed one of the district surgeons in connection with the Parochial Board. This is the fourth physician who has died in this town during the past three months from typhus fever, viz., Drs. McClosky, Paton, Conway, and Dowie—all young men.—*Greenock paper, Feb. 5th.*

The above is a sad paragraph, and shows that four men, young, full of life and hope, faced that malady, usually so fatal in Scotland, and fell at their posts. How many outside the profession appreciate the true heroism which calls the physician, to be firm and undismayed, to face with coolness an epidemic, which is carrying death and desolation to almost

every third door. To the friends of all we would extend a heartfelt sympathy, and while looking to our Heavenly Father for that consolation which he so freely gives, we would remind them that our brethren fell, at the post of duty, nobly trying to save life and ameliorate human suffering. Personally acquainted with two—Drs. Paton and Dowie—we feel that Greenock has sustained no common loss in the death of the former, who during the few years he had practised his profession, had attained a position, held by few so young in years. Dr. Dowie we first met in the fever wards of the Glasgow Royal Infirmary, a few years ago. Though then but a first year's student, his zeal had already attracted the attention of his teachers. Scarcely had he received his degree, than the message came, and he "passed to that bourne from whence no travellers has yet returned." They have not died in vain; they have left behind them a noble self-denying record, appreciated at least by their professional brethren, and, let us hope, by some who may at times speak slightingly of the labours attending the life of a true labourer in the field of Medical Science.—(*Ed. Canada Medical Journal.*)

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## DR. BROWN-SEQUARD IN DUBLIN.

During the last week much interest has been excited in Dublin by the visit of Dr. Brown-Séquard to that city, and the performance of a very formidable operation under the advice of that gentleman, the result of which is looked forward to with great interest. The operation to which we allude was the excision of a portion of one of the vertebræ in a case of partial dislocation of the spine from injury, and was performed by Dr. Robert Macdonnell in Jervis-street Hospital. The very formidable nature of the operation made its performance a matter for the most mature consultation and deliberation. After examination of the case by Dr. Brown-Séquard, and in view of the absolute certainity of death as the only remaining alternative, it was determined to endeavour to relieve the symptoms of paralysis by operation. The vertebra, which was low down in the dorsal region, was, we believe, found to be twisted and compressing the chord, and portions of the laminæ were removed. Up to the present time we understand that a slight improvement in motive power or in the incontinence of the urine and fæces has resulted.—*Dublin Medical Press, Feby. 8th,* 1864.

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We are glad to lear that Dr. Kenneth Reid, of Huntingdon, C.E., a former pupil of Dr. Hingston, and who occupied a distinguished position among the graduates of McGill College, at the last convocation has been appointed House Surgeon to the Birmingham Infirmary. After

his graduation, Dr. Reid was rather more than three months an assistant Surgeon in the army of the Potomac, and last fall proceeded to Europe. We are glad thus to chronicle the success of a Canadian graduate in one of the large manufacturing cities of England.

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## DAVIS'S SPECIFIC CIGARS.

Mr. Davis of this city has prepared medicated cigars with a view of affording to those who are smokers a means of indulging in the weed, at the same time that they can by the same means procure medication. Smoking stramonium, conium, belladonna and other narcotics is no novelty; and we find in works on the subject of materia medica mention made of this method of introducing these agents into the system. Those who prefer smoking to swallowing drugs, have thus an opportunity afforded them of indulging their appetite. Each box contains ten cigars, which are well made, and full particulars are given as to the method of using them. They are to be had of all druggists.

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## SYRUP OF THE DOUBLE IODIDE OF QUININE AND IRON.

We have received a bottle of the above elegant preparation from Messrs. Kenneth Campbell & Co., Apothecaries to H.R.H., the Prince of Wales, Great St. James street. It is an exceedingly clear syrup, and is unaffected by exposure to light. We have tried it in several strumous affections, and find it a valuable tonic and alterative; it is especially useful in this class of disease in children, and we can with confidence recommend it to the profession.

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## COLLEGE OF PHYSICIANS AND SURGEONS FOR LOWER CANADA.

At the semi-annual meeting of the Board of Governors of the College of Physicians and Surgeons of Lower Canada, held at the Laval University, Quebec, on the 11th of October last, the following amendments to the Rules and Regulations of the College were unanimously approved, and will be submitted for adoption at the triennial meeting of the College, to be held in the town of Three Rivers, on the second Wednesday of July next, according to law.

### REGISTRAR AND TREASURER.

The first section under the following heading shall be amended by substituting the following in lieu thereof:

1. The Registrar shall keep in his possession the books of enregistration, one of which shall be for students entering upon the study of medicine or pharmacy, and the other for the members of the College,

licentiates, midwives, apothecaries, and all other persons practising medicine or pharmacy in Lower Canada, and he shall have charge of the seal of the College.

The third section shall be amended by substituting the following:

3. The registrar shall receive as remuneration the sum of twelve pounds ten shillings currency annually, out of the contingent fund.

OF LICENTIATES.

The following shall form the fourth section of the Rules and Regulations under the heading "Of Licentiates."

4. Every person now practising medicine, surgery, midwifery, or pharmacy, or who may hereafter practice in Lower Canada, shall enregister his or her name, age, place of residence, nativity, the date of his or her license, and the place where he or she obtained it, in the books of the College, within three months after the pnblication of this By-law.

REGULATIONS, &c.

The following shall be substituted for the second section of the Reguations, and be in lieu thereof:

2. Candidates for Provincial license to practice either medicine, surgery, and midwifery or pharmacy, will be required to submit to a literary and classical examination on entering upon their studies, and a professional one, at the close.

The following shall form the eighth section under the above heading; the present eighth and ninth sections of the same to form respectively the ninth and tenth sections:

8. The candidate for pharmacy must also furnish proof that he has attended lectures on the following branches, at some University, College, or incorporated school of medicine, or pharmacy, within Her Majesty's dominions:

Chemistry, materia medica and pharmacy, two six months' courses of each.

Toxicology and botany, one three months' course of each.

It was moved by Dr. Sewell, and seconded by Dr. Gilbert, and resolved, That the proposed amendments to the by-laws now read, be published in the *Canada Medical Journal* of Montreal.

A true copy of the minutes.

W. MARSDEN, M.D., President.
Coll. Phys. & Surgs. L. Canada.
R. H. RUSSELL, M.D.E., } Secretaries.
H. PELTIER, M.D.E. }

Quebec, 12th October, 1864.

## MEDICAL NEWS.

The Castleton (Vermont) Medical College has ceased to exist, and the property been sold. The attendance of students at the New York colleges the present session is as follows: College of Physicians and Surgeons, 300; Bellevue Hospital College, 300; University of New York, 200. It is said that J. P. Lippincott & Co., of Philadelphia, will shortly publish a new edition of the United States Dispensatory, by Wood and Bache. Dr. Kirk, one of the physicians to St. Bartholomew Hospital, London, died recently at the early age of 41 years; he is well known in this country from his work on Physiology. Twenty-two thousand people live in cellars in the city of New York. A new fever Hospital has just been erected at Liverpool; it has accommodation for 160 patients: the cost was £6,000. The operation of Cæsarean section was performed in Belfast, Ireland, in the early part of January: the child was saved, but the mother died; she had been in labour four full days previous to the operation. An ophthalmic department has been added to Kings College Hospital, London.

The inauguration of a statue to the memory of Baron Larrey, Surgeon in chief of the armies of the first French Empire, took place recently. His son, who now occupies the post of Medical Director of the French armies, was present. Dr. Sims of Alabama, but for two years past a resident of Paris, has had the cross of the Legion of Honour conferred upon him by the Emperor Napoleon in recognition of his successful treatment of uterine diseases. The London *Lancet* of December 10th, 1864, says, that two children were brought up before the Wisbich Police Court charged with stealing several bottles of homœopathic medicine from the shop of a Mr. Finnell. It was said in Court that the children had eaten the contents of more than twenty bottles, "without being either the better or worse" for it.

A *conversazione* of the geologists' Association was held on Tuesday week at 32A, George street Hanover square, which was numerously attended by the members and their friends. Mr. Highley, F.G.S., exhibited, by the aid of his oxy-hydrogen demonstrating lantern, a fine series of microscopic objects enlarged by microphotography. Mr. Highley claimed for his invention that it supersedes the old system, all objects presented being faithful copies of nature, rendered with an accuracy impossible to be attained by hand-painting. Mr. T. Boverton Redwood explained to the visitors the nature and properties of the metal magnesium, and showed the beautiful light it produces when burned. A number of interesting objects were displayed by the members, amongst which may be mentioned a splendid series of crystals from Germany.—*Medical Circular.*

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Case of Accidental Poisoning by some Acro-Narcotic Poison, probably Digitalis.* By W. MARSDEN, M.D., President of the College of Physicians and Surgeons of Lower Canada; Hon. Member Berkshire Med. Ins., and Lyceum of Nat. Hist.; Fellow Medico-Bot. Soc., London; Corresponding Fellow London Med. Soc.; Fellow Mont. Path. Soc.; Hon. Fellow Medico-Chirurgical Soc., New York, &c., &c., &c.

In reporting the following case, I cannot, in justice to myself, withhold the expression of my surprise and regret, that a gentleman, so long and intimately connected with medical journalism as Dr. A. Hall, should have committed himself (as he has done in the February number of your journal,) by reviewing and criticising this case, on the garbled and imperfect testimony hastily furnished through the unprofessional channels of the daily papers, instead of waiting patiently to be enlightened by persons as capable as himself to do so, and better informed as to facts.

It is hardly necessary to say that the facts, as well as the conclusions of Dr. Hall are erroneous; as this will be seen by the evidence, which has been taken from the coroner's notes. As the evidence is voluminous, I have only extracted what has reference to the medical issue.

Certain portions of the following are *italicised* for facility of reference.

George Rankin, being sworn, says * * * * * * * *

A little way up St. John street (Mr. Scott and Mr. Murney being with him,) after turning Palace street, it was suggested by one of us that we should stop in the first drug store to take a tonic. We accordingly stopped at Mr. Sturton's. We went in, and the person here present, and who gives his name as Ainsworth Sturton, was the person I saw in the shop. We asked him, I believe it was Mr. Scott, for a tonic or bitters. He told us he knew what we wanted; I do not know the exact words, but they implied this. Before we got the tonic we continued conversing while he was mixing the tonic or bitters, addressing him frequently, which, I can easily understand, might have confused him. Sturton.

asked us if we would like a Seidlitz powder to be mixed up with this mixture; I immediately answered that I did not care for it. Mr. Scott followed my example, but Mr. Murney took his with a Seidlitz powder. I was the first to drink mine, or rather a portion of it, leaving about an inch in depth in the bottom of a large tumbler. Upon being told by one of the two above mentioned gentlemen that it would do me very little good if I did not drink the whole of it, I drank the remainder. Mr. Scott then drank off his, and Mr. Murney followed, and did the same. We then left the shop and proceeded towards Ursule street. We went to Mr. Stephen's shop. We remained there from five to ten minutes. We then left there and went to Mr. Breakey's, in Ursule street. After going into the house, and remaining there for about half an hour, *I began to feel extraordinary sensations at the ends of my fingers and at the extremities.* I mentioned the fact to the gentlemen present, when Mr. Scott said that *he felt the same sensations*, and I think Mr. Murney *said the same.* Feeling very unwell, I left the house with Mr. Scott, to whom I remarked, on going out of the door, that I was afraid that I was going to be attacked by one of my periodical illnesses ; that I thought the sooner I got to the hotel the better. Mr. Murney, the deceased, had, in the meantime, gone to the Bureau of the Board of Works. After arriving at Russell's Hotel, I went to my room immediately ; it must have been then a quarter past three. I was there very ill, feeling a *numbness at the end of my fingers, a numbness in the scalp of my head, the same in my feet. I felt very sick in my stomach, and vomited* the potion which Mr. Sturton had given me, as I think it tasted and looked like it. I then rang the bell for one of the servants of the hotel, requesting him to go down and see whether any of my friends were in the lower part of the hotel. While he was gone I felt much worse, *without any acute pain* with the same *death-like feeling* that I felt before. The waiter shortly returned, saying that none of the gentlemen I mentioned were below. About ten minutes after the waiter returned, Mr. Murney came up and found me walking up and down the hall ; he then told me that he had gone to the Bureau of the Board of Works, and that *he had fallen down while in the office*, and that some gentleman in the office assisted him up. The reason he assigned for his falling was that *he felt unable to stand up, and that he was afraid we had been poisoned.* I then remarked that something very extraordinary was the matter with me, mentioning, at the same time, that *I could barely walk.* I must have become much worse after this, for they tell me *I fell upon a table. I became stupid and insensible.* I believe that this was owing to my being *sick in my stomach ; I rather fainted than otherwise.* Previous to my falling upon a table Mr. Murney gave instructions to send immediately for a doctor—Dr. Marsden I think. I was then taken to my bed and remained there in a *half stupid condition until about six o'clock* when I got up, took Mr. Scott's arm and walked up and down the hall, feeling that all that was necessary was a little resolution to get over the effects of what we had taken. Impressed with the importance of this, I went into the room where Mr. Murney, the deceased, was lying, got into the bed alongside of him, and attempted to rouse him by tickling him and talking in such a strain as I thought would encourage him, but he begged for God's sake to have me taken away. I got into my own room. *I there had an inclination to sleep*, and begged of the gentlemen attending me to allow me to sleep. I described my sensations to Mr. Murney, and he remarked that *they were the same as he had felt since I had left*

*him, and was feeling then*, namely, *numbness in the fingers, in the feet, and an almost incapacity to walk.*

When I went to Mr. Murney's bed he was suffering great pain in his *stomach*, and complaining of a *rising in his stomach.*

Upon being shown a bottle containing a dark liquid, full to within an inch of the top, and another full to within a quarter of an inch of the top, I say that I think it was the latter that was used in our tonic. I now see the first bottle is labelled T. R. Digitalis, the second bottle is labelled T. R. Catech.

I do not know whether it was before the contents of the bottle were used in the mixture that my impression of the fulness of its contents was formed, or after, for *the colour of the contents of the two bottles now shown to me seem to be the same in the light in which they were shown to me. I did not observe any sediment in the bottom of the bottle which was used in the mixture* to this moment, for this reason, that I do not think that I saw more than half the length of the bottle, counting from the top, owing to its position.

Each of us had a glass of bitter ale, and that is the only intoxicating drink we took previous to our taking the potion at Mr. Sturton's.

The extraordinary sensations which I felt, and which I have mentioned were the following :—*A numbness, tingling in the ends of my fingers and feet, calves of the legs and scalp of the head.* I had *a desire to vomit* when I returned to the hotel, which *ceased after having vomited the potion.* I had *two or three passages from the bowels after I had vomited. I did not perceive any extraordinary sensations in the throat.*

I had *no unusual sensation, no burning sensation about my throat.* The taste of this potion remained in my mouth much longer than doses of medicine I have been accustomed to take. I felt *giddy*, and a *contraction of the eyelids* and also *contruction about the mouth as if it were about to close.*

The late Mr. Murney was a gentleman of *temperate habits.*

Charles Armstrong Scott, being sworn, says * * * * *

Having entered Mr. Sturton's shop, the first person whom we saw was the person here present, stating his name to be Ainsworth Sturton. I asked him to give us a tonic or something to settle our stomachs. He answered that he would do so. During the preparation of the draught we kept talking to young Sturton. The conversation ran on various topics. We addressed Mr. Sturton at times during his preparation of the tonic; we were speaking in a jocular way, but no chaffing. Mr. Sturton asked us if we would take a Seidlitz powder in our tonic. I declined taking any, but Mr. Murney took one. While in Mr. Stephen's, store Mr. Rankin complained of a *dizziness in the head. Mr. Murney complained also.* This was about a quarter of an hour after the draught had been taken at Mr. Sturton's. At the seme time I felt an *unpleasant sensation about the head*, but I did not pay any attention to it. We three then went to Mr. Breakie's place, where we remained about a quarter of an hour. Mr. Murney then left us to go to the Board of Works; we remained about five minutes after him. Going up Ursule street, deceased, Mr. Murney, felt unwell and said that he was *afraid that the Seidlitz powder was going to take effect;* he took hold of my arm. Mr. Murney made the *same complaint in Mr. Breakie's house.* Mr. Rankin, while at Mr. Breakie's, complained also, and *held his hand to his forehead as though he were in a stupour.* He complained of *sickness in the stomach*,

complained also of *numbness of the limbs and extremities.* On arriving at Russell's Hotel I felt *peculiarly stupid and prostrated, wishing to lie down.* I went to the billiard room opposite to the hotel where I remained for some time, and felt *prostrated*, and slight *spasms coming on.* I felt a *strong inclination to sleep.* I had some brandy, about a quarter to one half a tumbler. I felt at times a *ringing in the ears, numbness in the extremities*; at times I felt *rather frequent palpitations of the heart.* After taking the brandy I felt relieved, and remained in the billiard room about quarter or half an hour, and *still felt the sensations above described* to a certain extent. I then went over to Russell's Hotel and sat for some time in the office. *I do not think that I was in a fit state to remember all that occurred after taking the draught at Mr. Sturton's.* On leaving the office I went to Mr. Rankin's room; I think he was sitting on a chair. At times he would *fall in a stupor.* Mr. Murney was present at that time, and *in rather lively spirits*, he had just had *one stool.* Shortly after this, Mr. Murney complained of *spasms in the stomach, and he appeared to be suffering, and told me that he thought that he was going to die.* He continued complaining of *spasms* sometimes *in the region of the heart*, and *stomach*, and of *swelling in the eyes and mouth.* Dr. Marsden felt my pulse and said *it was very low;* he ordered me to take brandy and coffee.

I do not remember paying any attention to any bottles but one in Mr. Sturton's hands. The bottle in question contained *a dark liquid.* The only thing I remember is that the letters T. R. were marked on it. The bottle was *full with the exception of about an inch and a half.* The bottle in question was of about the size of one of the five bottles now shown to me. The potion administered to me and Mr. Rankin contained about two ounces. Mr. Rankin's potion was a little lighter than mine. I did not see Mr. Sturton pouring any thing out of any bottle. The bottle containing *a black liquid*, as I have mentioned, was placed on a shelf opposite the door. * * * * * * *

I took nothing but a glass of nectar half an hour previous to my entering Mr. Sturton's; I, therefore, can only attribute my *stupor* and indisposition to the tonic administered to me by Mr. Sturton. I took this nectar alone, that is, not with Mr. Rankin or Mr. Murney.

Robert M. Russell, of the City of New York, being sworn, says: * *

I was at Russell's Hotel, in the office, when the hall-boy stated that Mr. Rankin and Mr. Murney were very ill. I went up and found Mr. Murney in his room *holding on by the bed-post.* He immediately exclaimed. "*I am a dead man.*" "*George,*" meaning Mr. Rankin, "*Scott and myself are all poisoned.*" He complained of being *unable to walk*, and put his arm on my shoulder, and I helped him into Mr. Rankin's room, where I found Mr. Rankin *in a state of insensibility*, fallen across the table, his head close to the window as if he had fallen in the act of trying to get at the window for the purpose of having fresh air. Mr. Murney complained of *numbness* in his limbs, difficulty of respiration, and of not being able to lay down; that he could not breathe when he laid down, and of *pricking sensation* in his fingers and in his face as if pins were sticking in them. * * * He could barely stand, sometimes he could straighten himself, and sometimes let himself go as if he had been exhausted; it came on spasmodically.

James S. Thompson, being sworn, says, * * * I found Mr. Murney in a state of great excitement with *his hands on his stomach*; he complained of *numb-*

*ness in the limbs;* he also complained of his *head and limbs*, but he seemed to feel the above mentioned sensations *more in his stomach than any where else.* I went into Mr. Rankin's room, and found him lying on a table with his head towards the window, *apparently insensible.*

Samuel Sturton, of Quebec, chemist, being sworn, says, * * * I am the father of Mr. Ainsworth Sturton, who attends to the business in my shop. He is a student with me. Bottles number 1, 2, 3, and 4 were side by side on the shelves; after number four came a bottle containing tincture of iron, then came number five, the latter separated from number six by the stove-pipe. There were five bottles between six and seven, which five bottles could not be mistaken; then followed number seven; number eight was in a corner in another part of the shop. With respect to bottle number four, tr. digitalis, it is my firm conviction that no portion of it has been used since three months. I made it about six years ago, and that is all that I made; it was the only tr. digitalis that I had in my shop. I made no more than the contents of a bottle. When tincture digitalis has been kept long in a bottle a crust or film will form on the inside of the bottle level with the surface of the liquid. On examining the bottle, when I heard of the accident, I found the liquid stand level with the upper surface of the film; this film would take three months to form, the older the tincture is, the longer it takes to form a film. I now distinctly see the film, but see no film about half an inch lower. The digitalis and hyoscyamus, which are numbers four and six, contain poison; the others do not. Digitalis is often given in doses of half an ounce and one ounce to remove the effects of continual intoxication and other diseases.

Robert Henry Russell, of Quebec, Esq., Physician and Surgeon, being sworn, says: * * * It was a narcotico-acrid poison that must have caused the symptoms complained of. Digitalis is one of that class of poisons. Peculiarity of constitution, habit or use, age and the particular state of health at the time, very much modify the action of drugs upon the human body. Taking these into account, and from the history and symptoms of the case as related to me by Mr. Scott, and afterwards by Mr. Rankin, I think that such symptoms might be produced by an over dose of tincture of digitalis, and I believe that Mr. Rankin and Mr. Scott owe their relief to the fact of their having *vomited the contents of their stomachs.* If I were called to a case similar to this one, my first object would be to empty the stomach; and I believe that mustard, which is in every house, should be immediately used for that purpose if the medical man has not any of the ordinary emetics with him. If I was certain that digitalis was the substance producing the symptoms, and that they did not subside after the stomach had been emptied, I would use brandy and opium according to the urgency of the case. Brandy very often produces the desired effect in consequence of *digitalis having a tendency to produce both purging and vomiting* of its own accord. The narcotico-acrid poisons often produce, under modifying circumstances, *symptoms at first sight very much alike.*

*Question* by Mr. A. Sturton. Will you specify any other acro-narcotic poisons which could produce symptoms similar to those described by Messrs. Rankin and Scott?

*Answer.* NOT ANY EXACTLY SIMILAR.

*Question.* Is not strychnine a narcotico-acrid poison.

*Answer.* It is, but not in so common use as others, digitalis, aconite, and hyoscyamus.

*Question.* Could the poison have been absorbed in an hour and a half, so as to render emetics useless ?

*Answer.* Emetics are useful and ought to be used *so long as any portion of the poison is contained in the stomach* to prevent its further accumulation in the system. Digitalis and aconite, particularly when digitalis is administered in large doses, produce tingling and pricking sensations at first, but are easily distinguished afterwards by the *absence of heat and irritation in the mouth and throat when digitalis has been taken, which is always present when aconite has been taken.* In the case of digitalis the feeling experienced in the mouth is that of an *intensely disagreeable bitter taste.* The feeling in the extremities after administration of aconite is described by patients *as a loss of power.* One of the effects of digitalis taken internally is to produce *purging and vomiting.* I have no knowledge that it would produce any other post-mortem appearances that might be expected from the irritation of purging and vomiting. *I do not think that my hearing the evidence of Drs. Moffatt and Marsden would alter the opinions I have expressed. Aconite leaves morbid appearances in the gullet.*

George Stephens, of Quebec, being sworn, says: * * * I keep a store. The deceased, with Mr. Scott and Mr. Rankin, came into my shop shortly after taking the tonic. Mr. Rankin first complained of being unwell. He said he was *uneasy in his stomach.* Mr. Murney said he *was dizzy in the head.*

William Marsden, of Quebec, Esq., Physician and Surgeon, being sworn, says: * * * On arriving at the hotel at *about five o'clock*, I found the deceased, Mr. Murney, lying upon a bed, with Dr. Moffat and Mr. Ainsworth Sturton in attendance upon him. Mr. Murney being the worst of the three, I examined him first, and then Mr. Rankin and Mr. Scott, and, from the extraordinary *depression and fearful cold sweats, small, frequent,* and *irregular pulse* in Mr. Murney and Mr. Rankin, especially the sensation in the eyeballs described by Mr. Rankin as *a feeling as if the eyes were pushing out, or too large, and the lids would not close over them,* Mr. Rankin having vomited and purged, and Mr. Scott having vomited, but Mr. Murney having only *purged,* I directed my attention immediately and particularly to him. I at once said, "I have not a doubt that they have taken digitalis. The symptoms all indicate that most decidedly; under any circumstances they have taken something that is *fearfully sedative, awfully depressing;* there is no time to be lost and we must at once stimulate them all." I ordered brandy to be given to all without delay. I took a tumbler and poured out from a third to half a tumbler, which I gave to the deceased. I also ordered strong coffee, and asked Mr. Ainsworth Sturton for ammonia. Mr. Murney drank the brandy, *which had the effect of producing immediate vomiting, and thoroughly emptied the stomach.* A quantity of coloured fluid in addition to the brandy, of probably two pints, was thrown up. Young Sturton did not think at that time that digitalis was the cause of his error; he stated that he thought it was aconite. I said, "No, no; it is digitalis." I asked Ainsworth Sturton of what he had composed the draught. He said it contained tincture of gentian, tincture of cardamons, tincture of cinchona, and tincture of ginger and a little ammonia; about half an ounce of each of the four tinctures named, and from twenty to thirty drops of the ammonia. I asked Ainsworth Sturton

to step over with me to his shop, and show me the bottles out of which he had taken the mixture given to those parties. On entering the shop Mr. Ainsworth Sturton went round the counter. He then laid before me on the counter, bottles labelled with the four tinctures that I have already described. The tincture of cardamons, marked No. 1; the tincture of cinchona, marked No. 3; the tincture of gentian, marked No. 5; and the tincture of ginger, marked No. 7, were the four bottles shewn; and I did not ask for the ammonia nor did Mr. Sturton show it to me. I then said, "Show me where these bottles stand, and show me their places," and he showed me a vacant spot on the shelf, *immediately facing the door*. The shelves are divided by a little pillar or support at certain distances; and, in addition to the bottle marked tr. digitalis, No. 4, there was another bottle labelled tincture of muriate of iron, and nearly half full. There was a vacant space, sufficient for two bottles, to the left of the pillar facing it, and another vacant space sufficient for two other bottles to the right of those just mentioned, and to the left of the next pillar. On the right of the vacant space, and of the pillar, stood a bottle of tincture of hyoscyamus, which I believe to be the one produced. On seeing this I felt my suspicions as to the poison or wrong drug administered, entirely confirmed, and I said to Mr. Sturton, pointing to the bottle containing digitalis, "there it is." I took up the bottle and examined it, looked through it, and remarked that the shoulder and neck were very dusty, more so than any of the bottles on the counter. I took out the stopper, but could not see by that examination of the neck, that any thing had been taken out of the bottle; but I observed three dots where the dust had been displaced, in a direct line from the outer edge of the shoulder to the neck of the bottle, and I was impressed with the conviction that it had been used, and that the three spots had been produced by the liquid having been recently used, and dropped upon them. I held the bottle up between the light, and distinctly saw, as I do now, a couple of lines, the *lowest one nearly half an inch above the fluid*. I then carefully turned the bottle on one side and I saw a line or encrustation on a level, as near as possible with the fluid, and another one nearly half an inch below that, much thicker and stronger in its character, and showing that the fluid had rested there, at some period, for a long time. Immediately after this, whether Ainsworth Sturton had still doubts or not, as to aconite or digitalis, he went round the counter, and, getting a small memorandum book, about a small quarto size, he opened it, and, running down one side with his finger, he said, "I see I had used the aconite, as I had got only two drachms for a prescription." The next day, in order to satisfy myself, I took down some dusty bottles in my own surgery, about in the same state as was the digitalis I have spoken of, and pouring out some of the contents, found no more mark left on the neck than there was on the digitalis bottle which I had examined at Mr. Sturton's the day before. I also dropped a few drops of tincture of digitalis from my bottle, which was bright and clean, on to the shoulder of one of the dusty bottles, and found that it left a mark similar to those I have alluded to above, the dust and drop seeming to roll off together. We then returned to the hotel; Mr. Murney seemed to have rallied a little. The stomach rejected the coffee and everything else given to him afterwards. I administered about a teaspoonful of sulphuric ether in water to Mr. Murney. His stomach immediately rejected it. I then hurried home leaving instructions to give coffee and brandy, freely, and returned

immediately with a case of instruments, and found that the deceased had had a convulsion in my absence. Repeatedly deceased declared that he was dying, that he never felt so prostrate before. I next applied mustard poultices to his stomach, bowels, and feet. About this time a second convulsion came on, when we applied bottles of hot water, and deceased then, among other symptoms, suffered from one that frequently occurs in poisoning from digitalis, viz., enormous secretion of saliva. This second convulsion convinced me that another such would carry him off. I at this time stated my intention of trying to rouse him by a copious injection of brandy and warm water into the rectum. The third convulsion then came on, and, leaving Dr. Moffat and young Sturton to attend to him, I prepared the injection, but just as I was ready to use it they said he was dead. In the case of Mr. Rankin, there was *frequent fainting*. So marked was *the intermission and irregularity of the pulse* at one time *in all the cases* that a friend of Mr, Murney's, Mr. Dawson, an unprofessional man, taking his wrist said, "What a strange pulse,it stops altogether now and then." The general symptoms were *nausea, intermittent*, and *irregular pulse*, in the case of Mr. Murney very rapid occasionally, in that of Mr. Rankin less so, and in that of Mr. Scott least of all. This state of pulse, and his having suffered less than either of the others, I account for by the fact that he had vomited some time before Mr. Rankin, and Mr. Rankin had both *vomited and purged* a considerable time before Mr. Murney. There were tremors in the case of both Mr. Murney and Mr. Rankin; *in all of them pressure of the eye-balls*, and *frontal headache* or facial pain, or pressure without distortion, but *as if the mouth were drawn up to a very small size*, although it was not so. There was *extreme coldness* in the case of Mr. Rankin, (we had to wrap him up in blankets,) and *giddiness*, and in the case of Mr. Murney, *cold sweats, convulsions*, and death. There was no dilatation of the pupils in any of the three cases, but in that of the deceased, Mr. Murney, towards the last. I mention this fact because there was another drug that is classed as one of the narcotic poisons on the same shelf near the bottles that were used in the preparation of tonics, that is tincture of hyoscyamus, and had that drug been used by mistake or otherwise, there would have been great dilatation of the pupils. There was another symptom in Mr. Rankin that exists after poisoning from digitalis which is *violent*, or *spasmodic jumping*, or *action of the heart, coming on suddenly*, which, ere yesterday, was so violent at about six o'clock a.m., as to shake the whole of his body and the bed under him. I examined the body of Mr. Murney, *post-mortem*, entirely in the presence of Dr. Moffat, and in part of Drs. Jackson and Goldstone. A remarkable feature was the fluid state of the blood in all the organs and tissues, and its darkish colour when rubbed upon the surface. The heart was somewhat enlarged, the right auricle being full and distended with dark fluid blood. The right ventricle contained a little dark fluid blood also. With the exception of the slight enlargement of the heart there were no other morbid appearances worthy of note. The lungs were in some parts *somewhat engorged*, but otherwise healthy, crepitating freely throughout. *The stomach, which contained but a drachm or two of the fluid*, with a small particle of food, about the size of a large pea, was intensely inflamed, especially the mucous surface and *the coats throughout were engorged, and exhibited a dark appearance* externally. The small intestines exhibited similar appearances throughout a considerable portion of their length, to those presented in

the stomach; most strongly marked in the duodenum and jegunum, being most intense next to the stomach, and less so further down the intestinal canal. The bladder was empty. The *throat and gullet were healthy*, and *exhibited no trace whatever of inflammatory or other morbid action*, excepting at the junction with the stomach, not even what I have repeatedly seen in the throat and gullet of persons addicted to the use of ardent spirits, or habits of intemperance. There *was some injection of the vessels on the surface of the brain* and *slight effusion* under the arachnoid membrane at the summit of the head. There was also a *little effusion in the ventricles of the brain*, a little more than is usual in health. The brain healthy. I tied both ends of the stomach, and the phial I now show contains it and all its contents, and several feet of the intestinal canal. There can be no doubt, from the appearance of the stomach and intestines and the symptoms, that death was occasioned by a vegetable poison of the narcotico-acrid class, and that no analysis, by the most expert chemist, could reveal anything that could enlighten the jury. From all the circumstances connected with this case, both during life and since the death of the deceased, together with the results of the post-mortem examination, which latter could not definitely, alone, but in conjunction with other symptoms, guide me in the opinion at which I have arrived, I have not the shade of a shadow of a doubt that the deceased came to his death by poisoning from an over-dose of tincture digitalis given by mistake. I am not aware of any certain tests for digitalis, and if all the digitalis supposed to have been given to the deceased could, by chemical analysis, be reduced to the extract which it contains, digitaline, it would yield no perceptible quantity, and when yielded could not, by any test that I know, be proved to be that substance, excepting by experiment on the body.

*Question.* How long does it take to absorb brandy from the stomach into the system?

*Answer.* At times as quick as thought.

*Question.* Is brandy an emetic?

*Answer.* Brandy is a stimulant.

*Question.* Was the brandy given as a stimulant to Mr. Murney?

*Answer. Decidedly, and with the view of keeping him alive* till something else was done; but in his case it had the effect of producing vomiting, doubtless owing to the highly inflamed condition of the stomach.

*Question.* How long after you had taken out the stomach from the deceased did you examine the throat?

*Answer.* About nineteen hours, because I saw there was a desire by the counsel for Mr. Sturton *to make it appear that the late Mr. Murney had died from the effects of aconite*, and, as I felt convinced that the poison used was digitalis and not aconite, and, *as morbid traces would assuredly have been found had it been aconite*, I determined to leave no doubt that such was not the case. It is possible but not probable that angina pectoris caused the violent pulsations previously alluded to. Mr. Rankin never experienced such sensations before, and I have attended Mr. Rankin before, for disease of the heart.

Peter D. Moffatt, of Quebec, Esq., Physician and Surgeon, being sworn; after describing his being sent for, says: * * * I suspected that they were suffering from the effects of some poison. Mr. Sturton stated that *he could not rely upon some of the tinctures, because they had not been prepared by himself.* I

met Dr. Marsden at the door. I had been *three or four minutes* in the house. Dr. Marsden examined Mr. Murney, and said *no time was to be lost, that he was very prostrate*; he ordered a stimulant, and the patient *immediately vomited.* From the symptoms I am of opinion that Mr. Murney *died from the effect of tincture digitalis.* I have heard the evidence of Dr. Marsden, and *I entirely concur in what he stated in relation to the post-mortem examination.*

George Goldstone, of Quebec, Esq., Physician and Surgeon, being sworn, says: * * * I was present at the post-mortem of Mr. Murney. *I concur entirely with Drs. Marsden and Moffatt as to the statement made by them of the highly inflamed state of the stomach.* I have heard the evidence, and I have formed the opinion decidedly that the death of Mr. Murney was caused by having accidentally taken *a powerful dose of some acro-narcotic vegetable poison*, but what poison I am not prepared to say; but I cannot bring my mind to believe that it was digitalis.

It must be apparent on reading the foregoing depositions, that this case is involved in some obscurity, which I will try to clear up.

The conduct of the attorney for the defendant was throughout most indiscreet and the evidence, as dictated by him, much distorted.

The word *tingling* was never made use of by any of the patients during their sickness, but was introduced for the first time at the inquest (during the cross-examination) by Mr. Campbell, who *put the word into Mr. Rankin's mouth*, and then into Mr. Scott's. "By numbness," said Mr. Campbell, "you mean tingling." Mr. Rankin explained that by "numbness" he meant a feeling of what is understood by a limb "going asleep." Exactly, said the attorney, and ordered "tingling" to be written down, which was accordingly added in the margin, but without Mr. Rankin's explanation; and on every use of the word numbness afterwards, tingling was uttered by the lawyer!

The design was evidently to break down the idea of digitalis having been the poison administered, and raise doubts in favour of aconite; and thus remove the suspicion of error from Ainsworth Sturton, to his unfortunate shop-boy. My only object was, and is, to get at the facts of this sad case, and I am honestly moved, both by humanity and science, to endeavour to add something to our imperfect store of pathological facts, from my own knowledge and experience.

Dr. Hall, in his hasty critique assumes, that aconite was the poison used, concluding his article on the subject in these words: "I think, in conclusion, that it will be conceded that the train of symptoms as revealed in the three cases, point to aconite as the poison really ingested." I think I shall have no difficulty in convincing him, or any unbiased person, that his deductions are erroneous, and this not only by the strongest circumstantial evidence but by the clearest positive testimony of the symptoms, in both the living and dead. That *aconite*

may have been used in a very small quality is *possible;* but that digitalis was used in poisonous quantity is not only possible, but *morally certain.* In support of this proposition I will relate symptoms that existed in two of the cases not mentioned in my testimony because unimportant to them; but not so to the medical inquirer. Mr. Murney complained of a *strange sensation in the penis* at first, which was followed by a feeling "*as if the penis and testicles were all drawn up into the body, and had disappeared.*" Orfila (1) inferred from his experiments that digitalis first quickens the circulation, and then retards it, rendering it at the same time more or less irregular, that it excites symptoms of *intoxication* or *stupefaction,* augments largely the secretion of urine, and *irritates the mucous membrane of the genito-urinary passages.* Mr. Scott also complained of *peculiar sensations in the urinary organs,* and said that he had a *desire to void urine* without the ability to do so. He also complained of *frontal headache* and *pressure on the eye-balls,* which he did not mention before the jury.

Writers on this subject mention certain effects produced upon the urinary and genital organs, besides these which may be cited as characteristic of digitalis. Jorg (2) says, "It irritates the digestive organs, causing, among other symptoms, *diarrhœa,* that it greatly augments the discharge of urine, that it *excites the genital organs, causing titillation of the glans penis,* erections, and seminal emissions," &c. Before entering more fully upon the positive pathological signs furnished in these cases, let us consider the circumstantial evidence.

First, there was *no aconite in the shop.* This was proved by Mr. Sturton's admission to Dr. Marsden, on looking over his memorandum book. But, for the sake of argument, suppose that *two drachms* of common tincture of aconite (not Fleming's) which had been "obtained about six weeks before to fill a prescription," had not been so used; and that the "careless boy" had put it into the bottle of tincture of gentian as at first supposed by A. Sturton; what then? The tincture of gentian bottle, that had been used for the tonics, contained fully a pint of fluid after the tonics had been taken out, and must therefore have contained seventeen ounces and a half before, or, say thirty-five half ounce doses. Divide two drachms, or one hundred and twenty minims, by thirty-five, and it gives 3$\frac{3}{7}$ths of a drop in each dose of the tonic. Does any pathologist believe that *three drops and three sevenths of the tincture of aconite* could or would occasion death, or any of the more aggravated or intense symptoms of poisoning felt and described in these cases? The case related by Dr. Easton, (3) in which twenty-five minims of tincture of aconite were given, shows probably the smallest dose which has proved fatal.

So much then for the *probability*, not to say *possibility* of aconite being "the poison really ingested." Dr. Hall says, "I do not think it necessary to multiply authorities to demonstrate that the symptoms of poisoning by digitalis and aconite are quite specific in each case, and so characteristic as to render it a matter of surprise that the two drugs should be confounded." Here we are decidedly at issue, and I can furnish numerous authorities to support my opinion. Orfila (4), speaking of the acro-narcotic poisons, says, "Il nous semble utile d'établir plusieurs groupes, dans chacun desquels nous rangerons les poisons qui se rapprochent les plus par leur mode d'action." Further, under the head of (5) "Symptomes déterminés par ces poisons," and "Lésions de tissu produites par ces poisons," he furnishes a train of symptoms and effects common to aconite, digitalis, tobacco, &c. Among the recorded symptoms of poisoning by aconite, digitalis, &c., it must be conceded that there are some that are equivocal and varying, depending probably partly on the healthy constitution or idiosyncrasy of the victim, and partly on the dose or circumstances connected with its administration, as the state of the pulse, the stomach and bowels; but, on the other hand, there are some symptoms that may be considered as distinctive or characteristic. Among the latter I would class *burning sensation in the mouth, throat, and stomach* (6), *constriction of the throat, loss of voice*, and laborious breathing, or *burning and numbness in the lips, mouth, and throat, extending to the stomach;* and among the organic or *post mortem* effects are *redness or inflammatory traces in the gullet*, &c., (8) *all* distinctive of aconite, and not common to aconite and digitalis. Dr. Fleming (9), who may certainly be cited as authority, says, that in *medicinal doses* it occasions *warmth in the stomach*, nausea, numbness and tingling in the lips and cheeks, extending more or less over the rest of the body, *diminution* in the force and frequency of the pulse, which sometimes sinks to forty in the minute, &c., and when administered in doses adequate to occasion death, the least variable symptoms are, first *numbness, burning and tingling in the mouth, throat and stomach*, then sickness, vomiting, and pain in the epigastrium, next general numbness, prickling, and *impaired sensibility of the skin, impaired or annihilated vision, deafness*, and *vertigo*, also *frothing at the mouth, constriction at the throat, false sensations of weight or enlargement of various parts of the body*, great muscular feebleness and tremor, *loss of voice* and *laborious breathing*, distressing sense of sinking, and impending death, a small, feeble, irregular, gradually vanishing pulse, cold clammy sweat, pale, bloodless features, together with perfect possession of the natural faculties *and no tendency to stupor or drowsiness*; finally, sudden death at last, as from

hemorrhage, and generally in a period varying from one hour and a half to eight hours. He further (10) *denies that purging is ever produced in any genuine case of poisoning by monkshood,* or the existence of *stupor or insensibility.*

Ballardini of Brescia, who met with twelve cases of poisoning with the juice of the leaves of aconite (11.), says the *head-ache was chiefly occipital.* Another reliable and tolerably recent authority (12) says, the first and most usual symptoms, of poisoning by aconite, are a *burning and numbness of the lips, mouth, throat and stomach,* followed by tingling in various parts of the body, *loss of sensation, vertigo, and dimness of vision, tremors, cramps,* great prostration, *sense of fulness in the throat, speechlessness, hurried respiration,* and *death in a state of collapse. General convulsions are unusual,* as we find that in fifty-three cases collected by Dr. Tucker of New York, (13) they are mentioned as having occurred only in seven. The mind remains perfectly clear, he says, there being in general *neither stupor nor delirium.* The latter symptoms were seen only in three cases out of fifty-three, collected by Dr. Tucker. The symptoms of poisoning by aconite, he adds, usually arise within a few minutes after it has been taken; and when death takes place it is in the majority of cases, within three hours; and this authority says, (14) the symptoms are very strongly marked; consisting in a *burning heat in the mouth, throat, gullet, and stomach;* a sensation of swelling in the face, and of tingling over the entire body, &c., and after death, he adds, severe traces of *inflammation* have been found in the *gullet stomach, and intestines.* The most complete medico-legal history of poisoning by aconite, has been given by Dr. Geoghegan, of Dublin. In the Dublin Medical Journal, (15), he says, in *two minutes,* he felt a *burning heat in the mouth, throat, gullet and stomach*; then a sensation of swelling in the face, a general feeling of numbness and creeping of the skin. Restlessness, and dimness of sight, and stupor almost amounting to insensibility, followed; and about one hour after the meal he was found speechless, frothing at the nose and mouth, the hands and jaws clenched, appearing occasionally as if dead, and then again reviving. Vomiting, purging, tenderness of the epigastrium, cramps, tingling of the flesh, and a *burning taste in the mouth* followed. Pareira (16) relates the cases of a family of three persons, who were poisoned by aconite. About three quarters of an hour after dinner, Mr. Prescott complained of *burning and numbness of the lips, mouth, and throat* and which soon *extended to the stomach,* and was accompanied with vomiting, &c. Mrs. Prescott was affected in the same way. She had the same *burning and numbness* of the *lips, mouth throat, and stomach,* and

violent vomiting. Her attempts to speak were unintelligible sounds, having *lost her power of articulating*, but not her consciousness. She had no cramps, spasms or convulsions. The hearing was unaffected: sensibility of the body was greatly impaired, her face and throat were almost insensible to touch. She felt very giddy, but was neither *delirious nor sleepy*. She was frequently *pulling her throat about*, but she knew not why. The child was similarly but more slightly affected, except that she evinced a slight tendency to sleep. Like the others she was constantly *putting her hands to her throat*. The same authority says, (17) when the root or its tincture is swallowed, the most marked symptoms are, numbness and tinglings of the parts *about the mouth and throat, and of the extremities, vomiting, contracted pupil*, and *failure of the circulation*.

Dr. Fleming's (18) inaugural essay, which obtained a gold medal from the University of Edinburgh at the graduation in 1844, gives *warmth in the stomach* in doses as small as five drops of the tincture of aconite, increasing in intensity with the increased dose; and after describing four degrees of operation under experiments which do not terminate fatally, he says, when the action of the drug is carried to a fatal extent, the individual becomes entirely *blind, deaf and speechless*. He either retains his consciousness to the last, or is affected with slight wandering delirium; the pupils are dilated; *general muscular tremors*, or even slight convulsions supervene; the pulse becomes *imperceptible both at the wrist and heart*, the temperature of the surface sinks still lower than before, and at length after a few hurried gasps, *death by syncope* takes place.

It will be superfluous to cite more symptoms of poisoning by aconite, having already given enough to shew, that *the only symptoms clearly characteristic of poisoning by aconite in this case was numbness*, which the lawyer persisted in calling tingling. I think also, that I have established circumstantially, but clearly, that only *a very small quantity of tincture of aconite*, could have been given, if given at all. I will now by the same sort of evidence, before referring to the symptoms, demonstrate the *probability* that *a poisonous quantity of digitalis was used*. The tonic was composed of half an ounce each of the tinctures of cardamons, cinchona, gentian and ginger, besides aromatic spirit of ammonia. Mr. Murney, Mr. Rankin and Mr. Scott, declared, that one of the bottles used for the tonic contained a black liquid, and *was nearly full*. That could not by any possibility have been any of the above, because the tincture of cardamons was hardly *one third full*, and evidently *not so dark* as the cinchona, or digitalis. It could not have been the cinchona be-

cause that was *nearly empty*, there being only about an ounce in the bottom. It could not have been the tincture of gentian or ginger, as they are both *pale coloured*, and were about half full. But it might have been the digitalis bottle, and doubtless was, as it was *nearly full*, and *stood next to the cinchona* on the same shelf, for which it was unquestionably mistaken. It also stood upon the shelf *opposite the door*. To recapitulate; the bottles stood in the following order, from left to right Cardamons (*third full*), Cinchona (*nearly empty*), Digitalis (*nearly full*), Muriate of iron (*half full*), Gentian (*half-full*), &c. It could not have been the tincture or muriate of iron, as independently of the quantity, the decomposition would have at once shown the mistake. Being convinced in my own mind, that the almost full bottle of digitalis had been used for the almost empty one of tincture of cinchona, I proceeded to make a minute examination of the digitalis bottle, and saw *clearly*, that which the jurors also saw, (Mr. Sturton could not see it) that the line or film, on the tincture of digitalis bottle, "which was nearly half an inch above the fluid," had the appearance of age; and the interspace on the bottle, was *clear, and indicated recent use.* Besides this, *the interspace would contain about an ounce and a half*, which was the quantity used in three tonics. Above the line just mentioned, at the distance of about the twentieth part of an inch, was another line or film, like the former, and *perfectly distinct*, shewing that a drachm or two had been taken out at some former indefinite period. The line or film mentioned by Mr. Sturton in his evidence, as being on a level with the fluid, or nearly so; and the one mentioned by Dr. Marsden, half an inch below it, were not like those above the liquid, either in colour or character; but were *incrustration or deposit* of some other fluid, that had stood a long time quiescent, and *not the whitish film*, which is characteristic of tincture of digitalis; as those above the fluid were. It seemed to have been a deposit of some brownish or reddish brown tincture; such as tincture of senna, or rhubarb, or some other dark brown tincture. My impression is, that the bottle had been used at some former period, for some other tincture than digitalis; as the incrustration or deposit was thicker towards the bottom of the bottle; having distinct concentric parallel rings; shewing that the contents had been taken out at different times.

Dr. Hall says, Dr. Marsden "expressed dissent from the opinion given by Mr. Sturton, respecting the properties of digitalis." It was, he said, a most deadly poison." Will Dr. Hall please point out in Dr. Marsden's evidence, where he expressed such dissent?

Although I have repeatedly given half ounce doses of tincture of digitalis of late in delirium tremens, and I use digitalis in all its forms in

my practice, more extensively perhaps than any half dozen of my professional brethren here—I have never had the hardihood to *administer* even half a drachm of *good* tincture of digitalis at a dose, where my paternal was *free from cerebral excitement.* I nevertheless designate digitalis as a deadly poison, and among numberless authorities who do so, Messrs. Tardieu and Roussin, the former professor of Medical Jurisprudence, and Dean of the Faculty of Medicine of Paris, and the latter associate Professor of Chemistry and Toxicology of the Imperial military Medical school,) say: (19.) La digitaline est en effet, *un des poisons les plus violents que l'on connaisse;* and Orfila (20) remarks, les feuilles, les extraits aqueux et résineux, ainsi que la teinture alcoholique de digitale, pourprée, jouissent *de propriétés vénéneuses très énergiques,* à une certaine dose. Professor Burnet, in one of his best works on Botany; his "Outlines of Botany," describes digitalis, "as one of our most beautiful native plants, and one of the most active indigenous medicines and insidious poisons. (21.)

Let us now consider the symptoms of poisoning by digitalis, as presented by some of the most reliable and recent authorities; and see how far they correspond with the symptoms which presented themselves in the present cases.

Among the most prominent symptoms, Galtier says (22) of digitalis:

Elle ne paraît pas influencer le symptôme nerveux d'une manière aussi profonde que les solannées vireuses; ainsi il y a bien *moins souvent trouble, perturbération de l'intelligence et le délire,* les hallucinations sont aussi bien moins fréquentes et même assez rares. Lecoma est bien moins profond et bien moins constant, tandis que *les couvulsions s'observent, au contraire,* très souvent. Dans *la plupart des observations* les troubles cérébraux ont consisté en *vertiges, cepalalgie, étourdissement, pesanteur de tête, démarche chancellante,* comme dans l'ébriation, *perte de connaissance, insensibilité, convulsions, coma, faiblesse très grande*; mais presque toujours *l'intelligence s'est conservée, &c. Les troubles gastro intestinaux sont constants,*et consistent en *chaleur, douleur,sécheresse, construction au gosier* quelquefois *salivation* plus ou moins abondante, *nausées, vomissement muqueux, coliques épigastierques* ou *abdominales, diarhée,* plus rarement constipation. Ces symptômes apparaissent quelquefois avant les troubles cérébraux, mais le plus souvent ils leurs succèdent, *persistent autant qu'eux* et même plus ou moins de temps après leur disparition. Les urines sont quelquefois suspendues ou rendues avec difficulté, *douleur à l'extrémité de la verge et à la région hypogastrique qui est alors tendue.* La digitale *a une très grande influence sur les organes* de la circulation.

Le pouls est constamment ralenti, et peut tomber à 50. 40. 30. pulsations; il est en outre *intermittant irrégulier* dans ses battements. Les cardialgies, *les syncopes, les hypothemies* sont assez fréquentes. *Le froid à la peau est très intense et s'acompagne quelquefois de sueur visqueuse.* La marche de l'empoisonnement par le digitale est loin d'être constante; ce sont ordinairement d'abord des symptômes *cérébraux légers qui apparaissent les premiers auxquels s'ajoutent bientôt les troubles gastro intestinaux et circulatoires*, et si la terminaison doit être fatale, *les uns les autres deviennent plus intenses* et la malade succombe en douze, vingt-quatre heures.

The italics in the preceding description indicate symptoms that were common to all three of these cases. Christison (23) also describes the symptoms produced by a dose somewhat larger than is usually given with a minuteness that is most applicable to these cases, as follows: "*Great nausea, frontal headache*, sense of disagreeable dryness in the gums and pharynx, *some salivation, giddiness, weakness of the limbs, feebleness and increased frequency of the pulse*, in a few hours *an appearance of sparks before the eyes*, and *subsequently dimness of vision*, and a feeling of *pressure on the eyeballs.*

Dr. Sigmond (24) says, when the poisonous effects are produced after the symptoms of disturbance of the alimentary canal (indicated by *vomiting and purging*, then *vertigo, drowsiness*, and *frequent faintings*) come on, the skin is bedewed with *a cold sweat*, the tongue and lips swell, *profuse salivation occurs*, sometimes *the action of the kidneys is totally suspended*, at other times it is increased, with *frequent desire to expel the urine*, or at other times inability to retain it is felt; the *pulse intermits, and is slow*, and delirium, hiccough, *cold sweats, confused vision, sometimes convulsions*, and *frequent faintings follow*, till *death* closes the scene.

Let us take the symptoms of poisoning by digitalis according to Pereira, when given in fatal doses, as described by Dr. Hall, and add to them numbness, drowsiness and salivation, and they will exactly describe the case of Mr. Murney, and read thus, "*vomiting, purging, and griping pain in the bowels; slow, feeble, and irregular pulse, great faintness, and cold sweats; discolored vision at first, giddiness, extreme debility; drowsiness, salivation, afterwards insensibility and convulsions with dilated insensible pupils*," and numbness from the beginning. Will Dr. Hall say that these are the symptoms of poisoning by aconite *because* there was *numbness* or a *prickling sensation*," as if the part had fallen asleep?"

Of the toxical effects of digitalis *post mortem* little is known, and it is

therefore deeply to be regretted that the evidence in these cases is not of a more positive kind. In the numerous writers that I have consulted on this part of my subject, it is generally disposed of thus, "injection of the external membranes of the brain, and some redness of the mucous membranes of the stomach." The recent case however of la veuve de Pauw (25) throws some light on this hitherto unknown subject; from which I extract the following:

"Le cervaux est à l'état normal. L'intérieur de la bouche et de l'arrière gorge n'offre rien à noter.

"Les poumons sont parfaitement sains, nous n'y découvrons ni congestions, ni altérations inflammatoires, ou tuberculeuses. Le cœur également intact renferme une assez grande quantité de sang à demi coagule. Après l'avoir débarrassé de tous les caillots, nous constatons que toutes les parties de cette organe, et notamment les valvules et orifices, sont tout à fait à l'état normal.

"A l'ouverture de l'abdomen, on ne trouve aucun épanchement de sang de sécrosité, ni d'aucun autre liquide dans cette cavité, les viscères abdominaux, la foie, la rate et les reins sont sains. Quant au tube digestif, estomac et intestins ils présentent seulement par places quelques suffusions sanguines, quelques points congestionnés répandus dans toute la longueur de l'intestin; *mais nulle part la membrane muqueuse n'est le siège d'une inflammation soit aigue soit chronique*, nulle part il n'y a ni ulcérations, ni amollissement, ni perforation."

In my evidence before the coroner I said "the stomach was intensely inflamed, especially the mucous surface; and *the coats throughout were engorged, and exhibited dark appearances externally.* But I must admit that the foregoing description of Tardieu and Roussin is far more accurate than mine. I ought to have said that the stomach was intensely congested or engorged, but not inflamed. The true appearance was *congestion* and not inflammation, and seemed to extend to the deepest seated tissues, or the subjacent coats; and is more accurately described when I say that, "the coats *throughout* were *engorged, and exhibited dark appearances externally.*

The following symptoms from the same report are analogous to those in my case, and especially those having reference to the heart and circulation: "Les premiers symptômes graves, qu'elle a éprouvés dans la nuit qui à précédé sa mort, ont consisté en vomissements répetés et d'une extrême violence, et en *une affaiblissement rapide.* Le médecin fort distingué qui l'a vue à ses derniers moments, M. le docteur Blachez chef de chimique, de la faculté, constate, qu'elle est *pâle, fort agitée, baignée d'une sueur froide*, se plaignant d'un mal de tête insuportable; *le*

*pouls est irrégulier*, INTERMITTANT, PUIS IMPERCEPTIBLE ; *les battements du cœur* TUMULTUEUX, IRRÉGULIERS, CESSANT PAR INSTANT et BIENTOT PRESQUE SUPPRIMÉS.

M. Blachez compare ces symptômes à ceux que l'on observe chez les gens qui succombent à une hémorrhagie interne brusque et abondante. Il ne faut pas perdre de vue que ce n'est là qu'une comparaison, et l'on reconnaitra qu'elle est parfaitement juste, et prouve bien le fait dominant, celui *d'une affaiblissement de l'organe centrale de la circulation.* M. Blachez dans les moyens qu'il prescrit ne se pré-occupe que d'une chose, c'est *de ranimer l'action du cœur* (27.)

M. Blachez having no suspicion of poisoning, did not, like Dr. Marsden, suspect digitalis to be the cause of the remarkable symptoms that he witnessed; which indicated "something *fearfully sedative, awfully depressing,*" and resembled "une hémorrhagie interne, brusque et adoudante;" but, like Dr. Marsden, he first directed all his efforts to one solitary indication, viz., "to restore the action of the heart."

Space will not allow me to multiply extracts to establish the symptoms of poisoning by digitalis, numerous and strikingly characteristic as they are to be found. The little that is known of the *post obit* appearances of the toxical effects of digitalis, generally corresponds with the appearances in this case, and rather favours the idea of digitalis being the poison than aconite, of which latter, the *post obit* symptoms are better known.

Much has been said about huge doses of digitalis, which my own extensive experience from a very free use of the drug, induces me to condemn, as being as dangerous as reprehensible; and Christison says, (28) "the preparations of foxglove are very uncertain in strength. From what I have observed in the course of their medicinal employment, I consider few powders retain the active properties of the leaves, and even not many tinctures. Two ounces of the tincture of the London College, have been taken in two doses, with a short interval between them, yet without causing any inconvenience. This assuredly could not happen with a sound preparation."

The variable strength of the different preparations is also a cause of danger. Dr. Sigmond (29) mentions a case related by Mr. Brande, in which a person who had been in the habit of taking forty drops of the tincture of digitalis nightly, went into the country to visit a friend, and forgot to take the accustomed dose with him. He sent to a neighbouring apothecary for it, took it, and before morning died, actually exhausted by one of the marked effects on the nerves, where it produces its deleterious influence,—*repeated faintings.*

I will briefly sum up with a detail of the various symptoms which presented themselves in these cases, of which Dr. Moffat was a witness, as well as myself; leaving it to the enlightened and unprejudiced reader to draw his own conclusions.

1. Numbness in the hands and feet, legs and scalp.
2. Nausea, vomiting and purging.
3. Frontal headache, and a feeling of pressure on the eyeballs.
4. Great prostration and exhaustion, with weakness in the limbs.
5. Drowsiness, sleepiness, insensibility and stupor.
6. Syncope, and frequent faintings.
7. Irregular, slow, and intermitting pulse, stopping completely for several pulsations.
8. Palpitation, thumping and leaping of the heart.
9. Giddiness and staggering gait.
10. Salivation.
11. Spasms in the heart and stomach.
12. Abdominal pain and rising in the stomach.
13. A sensation of contraction of the mouth, as if drawn up into a very small size.
14. Convulsions and death.

There was no sense of heat or burning in the mouth, throat, gullet, or stomach, nor the characteristic "tingling" of aconite, in any of these cases; nor were there any of the ordinary *post obit* appearances in those parts; but, on the other hand, there was the indicative, irregular, intermitting pulse of digitalis, with palpitations and leaping and thumping, (les battaments du cœur tumultueux of M. Blachez,) and faintings. Aconite, (30) is a sedative of the cerebro-spinal system, by its direct action upon the nervous matter, and on the heart, and by its indirect action on both, through the congestion to which it gives rise. Digitalis, is a local excitant, and powerful sedative of the muscular and nervous systems: the former acting most powerfully and directly on the brain, and the latter on the heart. Of the toxical effects of aconite it may be said that *it annihilates the brain;* and of the latter, in the expressive language of Sigmond, "*It kills the heart.*"

In conclusion, from all I have read, and seen on this subject, I make the following deductions:

1. With digitalis, vomiting and purging always occur; but with aconite, purging rarely.
2. Digitalis always acts on the genito-urinary organs; aconite *very* rarely.
3. In digitalis the pupils are most frequently dilated, and in aconite

contracted. But, that is not a reliable symptom, as Fleming makes dilatation rather than contraction a symptom of aconite.

4. Pulse irregular and intermittent and fast or slow, *early* with digitalis, and irregular and reduced in strength *towards the last* with aconite.

5. Never heat or burning in the mouth, throat, gullet or stomach, with digitalis; always with aconite, even in doses as small as five drops.

6. Never redness or inflammatory traces in the mouth, throat or gullet, with digitalis; generally with aconite.

7. Drowsiness and stupor with digitalis generally; and wakefulness and delirium with aconite.

8. Pressure on the eyeballs with digitalis; none with aconite.

9. Pain in the head with digitalis, generally frontal; with aconite occipital.

10. Salivation generally with digitalis; with aconite never.

11. Respiration frequently slower and more laborious with aconite than with digitalis.

12. With aconite there is loss of speech, deafness or blindness sometimes, but not with digitalis, although the vision in both cases is sometimes similarly affected.

13. Giddiness is common to both digitalis and aconite.

14. Cold sweats, the same.

15. Numbness, tingling and prickling is peculiar to aconite.

16. In the majority of fatal cases of poisoning with digitalis, there are convulsions; whereas the reverse is the case with aconite.

It will be observed that Mr. Murney was the first to be affected with purging and pain in the bowels, and the last to vomit, which I am disposed to attribute to the action of the seidlitz powder, that was in his tonic; and this, probably, tended to the fatal issue in his case.

Finally:—Among the numerous recorded cases of poisoning with the acro-narcotic vegetable poisons, and especially aconite, the fact is patent, that in many of them where the symptoms produced by the suspected poison have been described, they do not always correspond with the recognized symptoms of the real poison. Doubts have been repeatedly expressed by toxicologists as expert as Pereira, Fleming, Christison, Galtier, and others, of the authenticity of such cases; where the unusual symptoms may have arisen from "some other root or plant being mistaken by the narrators for the real one, or from irritant substances given along with or after it.

Place d'Armes, Quebec, March, 1865.

NOTES.

1. Orfila, Toxicologie, ii, page 566.
2. Stillé's Therapeutics, vol. ii, p. 328.
3. Glasgow Medical Journal, July, 1853.
4. Traité de Médecine Légale, vol. iii, p. 399.
5. Idem, pp. 399, 400, art. 157, 158.
6. Christison on Poisons, p. 666. Amer. Ed., Philadelphia, 1845.
7. Pereira, Elements of Materia Medica, vol. ii, p. 1807.
8. Pallas, These Inaugurale, Paris, 1822, from Orfila's Tox. Gen. 1827, vol. ii, p. 221.
9. Christison ut supra, p. 666.
10. Ibidem, p. 667.
11. Ib., p. 669.
12. Wharton & Stillé, Med. Jurisprudence, Philadel. 1855, p. 519.
13. New York Journal of Medicine for March, 1854.
14. Guy's Medical Jurisprudence, p. 697. Lee, New York, 1845.
15. Taylor's Medical Jurisprudence under Aconitum Napellus.
16. Pereira's Materia Medica and Therapeutics, vol. ii, p. 1087.
17. Ibidem, p. 1089.
18. Stillé's Therapeutics and Materia Medica, vol. ii, p. 355.
19. Annales d'Hygiène publique et de Médecine Légale, deuxième série, Juillet, 1864, 43° numero, p. 97.
20. Traité de Médicine Légale, vol. iii, p. 422.
21. London Lancet, Dr. Sigmond's Lectures, vol. xxxii, for 1836-37, fol. 534.
22. Traité de Toxicologie, tome ii, p. 233. Galtier.
23. Christison on Poisons, p. 679.
24. London Lancet, vol. xxxii, p. 532.
25. Annales d'Hygiène ut supra, p. 82.
26. Galtier, Traité de Toxicologie, tome ii, p. 286.
27. Annales d'Hygiène, ut sup., p. 121.
28. Christison on Poisons, p. 680.
29. London Lancet, vol. xxxii, p. 460.
30. Stillé's Therapeutics and Materia Medica, ut supra.

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*Notes on "Remarks on the late case of Accidental Poisoning, by A. Hall, M.D.," Professor of Midwifery, McGill University, &c., &c.* By R. H. RUSSELL, M.D.Edin., M.R.C.S.Lond.

The unfortunate case of acoidental poisoning that occurred at Quebec about the end of December last, has called forth some remarks from Dr. A. Hall, of Montreal, which appeared in the "*Canada Medical Journal*," for the month of February. Dr. Hall, equally with every one else, has an undoubted right to his opinions on these matters, which are of very grave importance to the public. When these opinions are honest deductions, based upon a fair and honest statement of the facts and principles

advanced, and not from a garbled statement of the evidence, they are entitled to some notice, but this, I regret to say, has not been adhered to by Dr. Hall when criticising my evidence.

I shall only attempt a brief review of the facts as stated in evidence at the inquest, and, in justice, claim from the "Canada Medical Journal" the privilege of laying these statements before the profession and the public.

From the character of the symptoms observed by Dr. Marsden in the three cases, he at once concluded that they were caused by digitalis. Mr. Sturton, jun., objected to this, and thought aconite might have been mixed by mistake by a careless boy he had in his shop, with one of the tinctures he had given.

Dr. Marsden, having tasted the contents of the bottle which contained the supposed aconite, pronounced them to be tincture of gentian.

On the other hand, a close examination of the tincture of digitalis bottle, convinced Dr. Marsden that about the quantity stated to have been administered in the three potions, viz., one ounce and a half, had been recently taken from it. This he determined by the space he observed, between the level of the fluid in the bottle and a well-marked circular film above the fluid, distinctly showing where the fluid had stood for some time previously. This kind of evidence will be well understood by practitioners, who are in the habit of preparing their own prescriptions, which is almost the universal practice in Quebec. Of the whole range of vegetable tinctures, I know of none which so readily and distinctly forms this circular line on the bottle, as the tincture of digitalis.

Dr. Marsden states in his evidence :—"Immediately after this, whether Mr. A. Sturton had still doubts or not, as to the aconite or digitalis, he went round the counter, and getting a small memorandum book opened it, and, running down one side with his finger, he said, '*I see I had used the aconite as I got only two drachms for a prescription.*'"

Is this not strong moral proof against the presumption that "aconite was the poison really ingested?" Here we have the statement of Mr. Sturton, jun., the proprietor and manager of this establishment, (who has never obtained a license, or legal qualification of any kind for so responsible a position,) that he had previously used *all* the tincture of aconite (two drachms recently purchased for a prescription) which he had in his store, and of this he satisfied himself by a reference to his prescription book.

When the statement of Dr. Marsden, in regard to the height of the tincure of digitalis in the bottle, the declaration of Mr. Sturton, jun., and Mr. Sturton, sen., to the contrary notwithstanding, is coupled with the fact established by the prescription book of Mr. Sturton, jun.,

that he had no tincture of aconite in his shop at the time, I think it more reasonable, as well as in perfect accordance with the facts and the evidence, to attribute the cause of death to digitalis and not to aconite.

Why did Dr. Hall omit to give the statement of Dr. Marsden in regard to the tincture of digitalis bottle when he quoted the declaration of the Messrs. Sturton on that point? The reason is obvious.

Such then are the proofs against the presumption that aconite was the cause of death.

The defence intended to have been set up was, first, an exposure of the habits and mode of life of the deceased, and by this means to prove that neither the death of Mr. Murney nor the symptoms in the other two gentlemen, his associates, were caused by the potion they had taken in Mr. Sturton's store. It was discovered, however, that the temperate habits, the regular mode of life, and the unblemished character of the deceased could be established by hosts of repectable and trustworthy witnesses, in refutation of so base an attempt to stain the character of the dead.

The other alternative to be pleaded was the act of the careless boy mixing the two drachms of tincture of aconite with the tincture of gentian. Why was not this careless boy examined on this point at the inquest?

It must be admitted, however, that opinions are very discordant respecting the medicinal powers of digitalis. May not these discrepancies arise, in a great measure, from the quality of the plant selected, as well as from the want of uniformity in the preparations employed, besides the well known liability of all the preparations of digitalis to deteriorate. When the large doses of tincture of digitalis employed by Dr. King became known thirty years ago, it was suggested that as Dr. King lived in Suffolk, and as the plant is not found wild in that county, nor in the adjoining counties of Norfolk and Cambridge, he was not acquainted with the true plant, the genuine *purple-stalked* digitalis, and that there must have been either some mistake on his part in the preparation, or that the true plant was not used.

Christison, an eminent authority, says, "there is no advantage in the large doses of a drachm and upwards, of the tincture of digitalis, which have been recommended by some; and such doses must be often dangerous."

I do not think that I am called upon now to demonstrate what are the specific symptoms that characterize any individual poison or class of poisons. Every tyro who reads any one of the "Manuals" on this important branch of medical education, thinks he knows them, and also thinks that

they will apply with mathematical exactness to each individual case that may present itself. In practice, however, both at the bed-side and in the witness box, how great a delusion! At one time convulsions may be present, at another absent, and in both instances the same cause operating. In another case the effect produced is irritant; in the next case, and from the same drug, the effect, narcotic. At one time he will find a few grains of arsenic have produced death, at another time half an ounce, an ounce, and even an ounce and a half of the same poison have produced no deleterious effect.

With a full knowledge of the fact, that, in one case, idiosyncrasy, in another habit, and in a third a particular state of health at the moment will produce an almost incredible tolerance of certain drugs. For example, in delirium tremens the surprising tolerance of opium, and, what will better apply to our present inquiry, the tolerance of tincture of digitalis itself, as first recommended by Dr. Jones, in that disease, and of the latter, as employed, more than thirty years ago, in doses of one ounce, in the treatment of acute inflammations, particularly pneumonia, I hold that, with a knowledge of such facts before our eyes, to give an unqualified answer to a general question, based upon discordant medical opinions and discrepant medical facts, is to forget the high moral responsibility that attaches to the duties of a medical witness and to defeat the ends of justice and the due protection of society. Such would, undoubtedly have been the result in this case, by inducing the jury to believe that one ounce was the regular and established dose of the tincture of digitalis in all cases, and was recognized as such by medical authors. The question put by Mr. Campbell, advocate, on the point was, "Have you read in Pereira, Dunglison, and other medical authors of doses of one ounce of tincture of digitalis being given, and do you believe it?"

I shall now, in conclusion, only briefly notice what my friend, Dr. A. Hall, intended to be the decisive finishing stroke, the *coup de grâce* to the whole affair.

Question by Mr. Campbell, advocate.—"Is not strychnine a narcotico-acrid poison?" Answer. "It is."

Dr. Hall remarks, "I am persuaded that it will be news to all medical writers on the materia medica *in future* to have to class strychnine among the narcotico-acrid poisons."

All the medical writers on the materia medica, or on medical jurisprudence, French, British, and American, with whose works I am familiar, class strychnine among the narcotico-acrid poisons. I subjoin a list of some of those authors, and for the convenience of Dr. A. Hall, I note

the volume and page in each. "I am persuaded" that a careful perusal "of them will afford news" to Dr. A. Hall.

Orfila, tom. 2, p. 5. et 246 à 279, also tom. 3, p. 438 et 406; Devergie, tom. 2, p. 835; Briaud, p. 491 et 472; Alibert, tom. 1, p. 429; Galtier, tom. 2, p. 246; Christison, fol. 682; Taylor, fol. 41; Guy, fol. 698; Smith, fol. 90; Beck, 1051 and 1028; Ryan, fol. 425 and 430; Dean, fol. 407; Stillé, fol. 514.

Quebec, 22nd February, 1865.

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*Resection of the Elbow Joint;* successfully performed on account of complete anchylosis after a gunshot wound. By DONALD MACLEAN, M.D., L.R.C.S.E., Prof. of the Institutes of Medicine, and Lecturer on Clinical Surgery, Queen's College, Kingston, C. W.

NOTE. The following case was treated by Dr. Maclean, during his service as Medical officer in charge of the Surgical wards of the Brown (U. S. A.) General Hospital, Louisville, Ky.:

CASE. William Whitten, a private of Company H., 121st Regiment, Ohio Vol. Infantry. Aged 22. Single. Admitted April 13th, 1864.

*Previous History.* His occupation previous to enlistment was that of a farmer. Of temperate habits. Had always enjoyed good health until he was wounded at the battle of Chickamanga, on the 20th September 1863, by a Springfield rifle ball, which entered the posterior and radial surface of the left fore arm at a point about two inches below the elbow joint; passed upwards and inwards, and lodged on the inner side of the arm about the same distance above the joint. Patient does not think that the ball passed through the joint, but that it only glanced over it. He states that shortly after the wound was received, the arm began to feel hot and painful, and that it became red and swollen to a considerable extent around the joint.

From the field Hospital he was sent to Hospital No. 3, Nashville, Tenn., where water, and afterwards simple cerate dressings were applied.

For three months after his admission to Hospital No. 3, patient was unable to sit up in bed, owing to the tenderness and irritability of the wounded arm.

About six weeks after his admission to the above-named Hospital, he noticed the joint becoming stiff. The attention of the surgeon having been called to this fact, he took the precaution to flex the forearm, placing it at a right angle to the arm. During this time patient says the wounds discharged very copiously, but he is not aware of any pieces of bone having come away.

About the 1st February, 1864, he began to walk about with his arm in a sling; his general health began to improve, the wounds healed up, but the joint was quite immovable.

By the 1st March his health was quite restored, and with his left elbow joint anchylosed, he was performing light duty. On this day, however, he fell, striking his left arm violently against the end of a bench. About twenty-four hours after this accident, the arm commenced to swell and became very painful.

On the third day afterwards the wound of entrance had re-opened, and continued so for three weeks, during which time it discharged a considerable quantity of pus. It then gradually healed up.

From Hospital No. 3, (Nashville,) he was transferred and admitted into this Hospital, under my care, on the 13th April, 1864.

*Condition on Admission.* General health excellent. There is complete anchylosis of the left elbow-joint, and a considerable excess of bony tissue surrounding the joint. The wound of entrance is still discharging a little, and there is a sinus extending down to the radius in the direction of the joint. The motion of the fingers much impaired, in fact they are almost immovable. Sensibility also much interfered with. I embraced an early opportunity to explain to the patient, that in my opinion there was still a chance of his obtaining a useful arm by means of the operation of resection. At the same time I did not conceal from him the fact that there was a certain amount of risk inseparable from the operation ; that in short, while there was a very good chance of his recovering with a new joint and a serviceable arm, there was also, on the other hand, a chance of his ultimately losing the arm or even his life.

After considering the matter for a few days, and consulting many of the other patients who had been operated upon, or treated by me, he declared himself willing and anxious to have the operation performed, and take his chance of obtaining in the end a useful arm. Accordingly, on 21st April, I proceeded to operate, assisted by Assistant Surgeon B. E. Fryer, U. S. A., in charge of the Hospital; Dr. John A. Ochterlony, U. S. A.; Dr. Wm. T. Kirke, Executive officer of the Hospital, and Coleman Rogers, Medical Cadet, U. S. A. Chloroform having been administered by Mr. Rogers, I made an H shaped incision over the posterior aspect of the joint, reflected the flaps thus formed, upwards and downwards, turned back the skin as far as possible on each side, dissected the ulnar nerve with some difficulty, out of a thick case of soft bony matter, and employed an assistant to hold it out of the way with a blunt hook. I then sawed through the centre of the exposed bone, found no trace of a joint, but the osseous tissue was considerably softer than it

should have been; the protruding ends of bone were now sawed off to the extent of two inches (from each), so that altogether at least four inches (in length) of the bone in the neighbourhood of the original joint had been removed. There was a good deal of oozing, but no vessel worthy of a ligature presented itself. The flaps were replaced and drawn together by metallic sutures, the forearm was placed at a right-angle, the joint enveloped in dry lint, and the patient returned to his bed.

Shortly afterwards arterial blood was observed oozing rapidly from the whole of the inner surface of the wound; cold water was found insufficient to arrest it, and recourse was had to the persulphate of iron with a satisfactory result.

In the evening a grain of morphia in solution was administered, and shortly thereafter the patient fell asleep, and slept pretty well the greater part of the night. During the two following days no untoward symptoms occurred; but on the third day erysipelas appeared in the neighbourhood of the incisions, and extended upwards and downwards over the whole extremity.

The only bad consequence which followed from the erysipelas was the separation of the lips of the transverse incision. So soon, however, as the cause of separation had disappeared, the incision was again drawn together, April 30th, and the edges having been slightly paired, immediate union took place.

May 1st.—Everything progressing favourably; patient eats and sleeps well; discharge healthy and not too copious. Water dressing used.

May 5th.—The arm looks very well, but patient has lost his appetite; complains of headache, constipation; tongue furred and sharp pain in perineo. Ordered, ℞, olei ricini ℥j, and hot fomentations to perineum.

May 6th.—Constitutional symptoms better, but the perineal pain continues.

May 7th.—An incision was made into the perineum, and a considerable quantity of pus evacuated.

May 8th.—Patient is much better this morning, slept well; ate his breakfast; no pain in perineo.

May 9th.—Commenced making slight passive motion in the joint, which is attended with considerable pain.

From this date everything progressed most favourably. The passive motion was gradually increased in extent and violence until the fore arm could be put through all the normal movements (flexion, extension, *supination* and *pronation*). The discharge gradually diminished in quantity, and soon ceased entirely. Patient got fat and strong, and towards the

latter end of May, began to acquire voluntary power in the arm; this rapidly increased until the end of June, when he was transferred from the Brown Hospital, to Camp Dennison, Ohio.

The day before the transfer, I had photographs of the arm taken in different positions for the purpose of showing the extent of motion in the new joint, and the patient's power over it. Some time afterwards I received a letter from the patient informing me that he was about to be ordered back to his regiment in the field, and asking me if possible to intercede for him to prevent his return to duty. I at once wrote to the surgeon under whose care he then was at Camp Dennison, gave him a pretty full account of the patient's history; begged him to favour me with a correct account of the condition of the arm, and, in a postscript, asked if he did not think that a man who had done his duty well while with his regiment, and had suffered so much as our patient had, was entitled to his discharge. As this surgeon was entirely unknown to me, I could not venture to say anything further in reference to the question of discharge. Within a few days I received the following letter in reply:

"DENNISON, U. S. A. General Hospital,
"August 3rd, 1864.

"SIR,—Yours of the 21st ult. was duly received, but absence from my charge a part of the time since, and a pressure of other duties, have caused the delay in answering it.

"Your operation on Whitten's arm is a complete success. The incisions are about healed, and the motions of the fore arm, with exception of a slight difficulty in supination, are perfect; and this difficulty will be overcome by a little perseverance on the patient's part in using it. Your suggestion as to his meriting a discharge is fully in accordance with my own feelings, but I fear our medical authorities will not view his case in so favourable a light. Excuse my delay in answering your letter, and

"Believe me, very respectfully,
"Your obedient servant,
"(Signed,) J. S. G. PAULDING,
"In charge 10th Division."

The next intelligence I received of the case was from the patient himself, dated "Johnstone, Ohio, Feb. 19th, 1865," from which the following is quoted *verbatim et literatim*:

"I was discharged about the 8th of last October; I have been at home with my father ever since that time. My left arm is about two inches and a half the shortest; I never noticed the difference there is in the

lengths of my arms till after I came home. I have been at work with it more or less all the time since I came home; it has got so that I can chop wood right smart with it. Any light work I can do as well as ever I could. This I close by saying that these few lines leave me well, and hoping they will find you the same. Your sincere friend,

"WILLIAM WHITTEN."

The first part of this letter is occupied with strong expressions of gratitude, and apologies for not having, at an earlier day, fulfilled his promise to write and inform me of the condition of his arm.

*Commentary.* Had this patient preserved full use of his hand, the wounds being healed and the joint flexed, I should not have felt justified in recommending the operation.

Again: had there not existed a good chance of restoring the functions of the hand *as well* as those of the elbow joint, the operation would not have been indicated. But, feeling convinced that the stiffness of the carpal and digital articulations was the result mainly of the compression of the muscles and nerves of the fore arm by the large mass of callus which had been thrown out around the elbow joint, it appeared reasonable that by removing the latter, not only would an opportunity be granted to nature of forming a new and useful elbow joint, but the muscles and nerves of the hand and fore arm would at the same time be freed from the existing obstacle to their functional action.

With regard to the amount of bone removed at the operation, four inches may appear very extensive; but, having had many opportunities of observing the result of this operation as performed by numerous U. S. A. surgeons, I am firmly persuaded that want of success has been attributable (in the great majority of cases) to the fact that too small an extent of bone was removed, the surgeon not possessing a sufficient degree of confidence in the restorative powers of nature. Very many cases have come under my notice, in all of which the result was complete anchylosis; in none was there anything like deficiency of new bone. The amount of shortening in Whitten's case was greater than it usually is, still much better have two and a half inches difference in the length of the arms than to have, *after* the trouble and annoyance of the operation, a *stiff joint.* When the operation is performed on account of disease of the elbow joint, it is not necessary to remove so much of the bone; nor would it be safe to do so, because, in such cases, the restorative powers of nature are not so great as they generally are in cases occurring in military practice.

Whitten, for instance, was a young man of strong constitution and sanguine temperament.

With regard to the incision, there was in this case no room to choose, the large amount of callus rendering the H unavoidable. By the straight incision it would have been impossible to expose the parts sufficiently. In the great majority of cases, however, the straight incision will be found preferable.

On this subject Prof. Syme (to whom we are indebted for having in modern times, revived this most valuable operation) says, "the integuments may be divided, either by a single longitudinal incision—as Mr. Park originally proposed—or in the more complicated form adopted by M. Moreau, which was like the letter H, the transverse cut being from side to side along the upper edge of the olecranon. The latter method is that which, until lately, I have employed and performed hundreds of times with the most satisfactory result.

It certainly is the easiest mode of procedure, but the former plan has a decided advantage in regard to the after treatment, from not being exposed to the inconvenience which attends the transverse incision if it does not heal by the first intention and allow the edges to separate.

If therefore the circumstances permit its performance the simple longitudinal incision should be preferred, especially in cases of anchylosis, where there is a great tendency to secondary hemorrhage and, consequently, much risk of primary union being prevented."

At least three opportunities have occurred of dissecting, *post mortem*, the parts involved in resection of the elbow joint in cases where the operation had been successful.

The subject is a most interesting and instructive one, but we cannot attempt its consideration at present.

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## REVIEWS AND NOTICES OF BOOKS.

*Shræder Van Der Kolk on the Pathology and Therapeutics of Insanity.* Translated by JOSEPH WORKMAN, M.D., Medical Superintendent of the Provincial Lunatic Asylum, Toronto, C. W. (Reprinted from the American Journal of Insanity.) 8vo. pamphlet, pp. 91.

Those of our readers who have had the opportunity of perusing Van Der Kolk's works, cannot but be impressed with their practical and high scientific value. The work before us is posthumous, being a compilation of materials left in the hands of two of the pupils of the illustrious author, Drs. F. A. Hartsen and P. Templeman Van Der Hoeven, who con-

sidered they could not more fitly honor the memory of their master than by giving to the world this little treatise. To Dr. Workman of Toronto we are indebted for a translation into English, of the second part of the work, which the translator states is of the "highest practical importance, as, if we may say so without derogation from the merits of the author, the portion most free from theoretic speculation. The first part is devoted to the anatomy and physiology of the brain, and includes a most valuable section on inflammation of the Dura Mater." The author's classification of insanity, under two great heads of Idiopathic and Sympathetic, is at once simple and comprehensive, and includes all the possible forms and varieties of mental disease met with. Under one or other head each individual case falls. The diagnostic signs in each are peculiar. The position of each case, whether under the first or second class, will be determined by the fact whether the brain is primarily or secondarily affected. Practically this classification is of the greatest importance, as it suggests the location of the physical disorder from which the attack proceeds, or with which it is necessarily associated.

"It has been usual to detail the various sorts of mental alienation according to the variety of their manifestations, to designate them by the terms mania, monomania, melancholia, dementia, and idiocy. This classification is certainly adapted to the superficial distinction of these various forms, and deserves, therefore, to be retained; at the same time I must say I have never found it practically serviceable, since it has its source rather in the mere symptoms of the disease, than its nature and efficient cause. For many years past I have included the different forms of the disease under merely two chief groups, which, with sufficient clearness exhibit themselves, either as idiopathic, or sympathetic insanity; and by peculiar diagnostic marks are readily distinguished; whilst with a therapeutic reference they merit our most serious consideration."

"In idiopathic insanity the brain suffers primarily. Some unusual mental exertion, or some undue excitement of this organ may lie at the foundation, or a violent impression,—a fall, a blow, or under a certain predisposition,—most usually the hereditary,—almost any cause may lead to the developement of the malady."

"On the other hand, in sympathetic insanity the brain suffers only secondarily, and the exciting cause lies in other parts of the body,—as the abdomen, or the organs of reproduction. From long continuance of this form, an idiopathic insanity may be developed; and it is certain that recovery cannot in any case occur unless the primary cause is removed. Herein seems to me to consist the chief importance of this classification."

Idiopathic mania is described by the author under two separate heads

of acute and chronic. The acute attack is almost certain to pass into the chronic form, not necessarily, however. This result is more than likely to occur from inappropriate treatment, or, in the words of the author, "after nothing at all had been tried, and the time opportune to recovery, had passed away." Can anything more pertinent exist to the question of the actual necessity of providing the means for the judicious treatment of the insane? Under chronic idiopathic mania, the author includes hallucinations, stupidity, torpor, dementia, and idiocy.

Under the head sympathetic mania, are considered several various forms "according to the different parts of the body, which are the primary seats of the disease, and from which it is extended to the brain, which thus becomes secondarily affected." In this class is included that peculiar condition of the left colon, described as elongation of the organ, and which most writers on this subject have associated with mania. Amenorrhœa, and various uterine derangements in the female and in both sexes, onanism, these are well known fruitful sources of mania. There is included a clear and succinct description of appropriate treatment for, each class, and to the physician is a work of great practical benefit. This little pamphlet will be found of use by the physician in general practice, but more especially will it be useful to him who has devoted his time and energy to the alleviation of this class of disease.

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*Glaucoma: its Symptoms, Diagnosis, and Treatment.* By PETER DRIK KEYSER, M.D. Philadelphia: Lindsay & Blakiston. 1864.

There is perhaps no one subject which has received and engages the attention of those who specially devote themselves to ophthalmic science more than the disease which forms the subject of the little pamphlet before us. While there are few diseases of the eye whose pathology, symptoms diagnosis and treatment present greater difficulties or wider differences of opinion, there is certainly none which tends more surely to that most dreadful of all calamities, viz., loss of vision. When we reflect how insidiously and slowly this affection perfects itself, and how great is the importance of an early and correct diagnosis as regards the prospect of a cure—we cannot doubt but that any attempt to condense, simplify and render practically useful what is known on the subject will be welcomed by the medical public. Such we believe to be the intention of Dr. Keyser's pamphlet—and as such we would recommend it as highly instructive and worthy of perusal. The author does not claim much on the score of originality; indeed he himself informs us that the substance of his work is derived from notes taken while attending the lecture of Professor von

Graefe at Berlin—and those of our readers who have seen Dr. von Graefe's Memoirs on Iridectomy, translated by F. Windsor, Esq., and published by the New Sydenham Society, will no doubt be already familiar with much of what is stated by Dr. Keyser.

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*The Pharmaceutist's and Druggist's Practical Receipt Book, with a Glossary of Medical Terms, and Copious Index.* By THOMAS F. BRANSTON. Philadelphia: Lindsay & Blakiston; Montreal: Dawson Brothers.

A more practical and interesting volume, on its particular subject, we believe does not exist, and we would strongly urge it upon the attention of every druggist and physician in the country, to whom we deem it worth more than twice its cost. Not only are all the preparations of the London Pharmacopœia given, but hundreds of other receipts, all alphabetically arranged, many of them very valuable. Even to the unprofessional the volume is of great value, as it contains many good receipts which are not to be found elsewhere. Among many we would mention receipts for arrowroot jelly, baking powder, beef tea, ginger beer, blacking for shoes, horse harness, &c., &c. The directions and descriptions are briefly but very clearly explained. At the end is a glossary which, to the student, will prove of great value, as the translation of many old directions are given. Mr. Branston, the compiler, has certainly shown much assiduity and investigation in its preparation, and we hope they for whom it is intended (and we believe it is of especial value to country practitioners) will show their appreciation of his labours. The work is got up in the usual creditable style of all Lindsay & Blakiston's medical publications.

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## PERISCOPIC DEPARTMENT.

### Surgery.

#### EXCISION OF THE TONGUE.

By JAMES SYME, Professor of Clinical Surgery in the University of Edinburgh.

Some years ago I endeavoured on two occasions to afford relief from disease of the tongue, otherwise incurable, by cutting out the entire organ; but, as both cases terminated unfavourably, I felt no desire to repeat the experiment, and have repeatedly declined doing so under circumstances of a very urgent character. In the early part of November last, Mr. W——, aged 52, from Manchester, applied to me on account of

a very formidable morbid condition, affecting his tongue. From its point to the root it was swollen and indurated, the surface being of a brown colour and roughly tuberculated, so as to resemble the back of a toad. It was also nearly quite immovable, and, from completely filling the mouth, not only preventing articulation, but rendered deglutition impossible with respect to solids, and extremely difficult in regard to fluids. From the same state of matters, there was a most offensive fetor through mucus secreted by the unhealthy surface not being permitted to escape.

The patient informed in writing that he had suffered from uneasiness in his tongue for many years, but that neither articulation nor deglutition was seriously affected until 1862, since which time he had been under medical treatment in London as well as Manchester without experiencing any benefit. As palliation seemed all that could be expected, I offered some suggestions with this view, and advised that no time should be lost in returning home. But soon after his arrival there, I began to receive from the patient very painful letters, reporting aggravation of the symptoms, especially in regard to deglutition, so that death from starvation seemed imminent, and urgently desiring some means of relief. To these appeals I replied that the only effectual remedy was removal of the tongue, and that this could not be done without very serious danger to life, so that the operation promised nothing more than a chance of escape. This slight encouragment brought the patient back, and he arrived here on the 27th of December.

Being thus as it were compelled to make another trial of excision, I carefully considered all the circumstances concerned that might tend to interfere with its successful performance. Of these the one which most prominently presented itself was the prevention of voluntary deglutition that must result from depriving the os hyoides of the power by which it is drawn forwards. In the common cases of cut-throat, where a large transverse wound is made into the pharynx, although the suicide rarely accomplishes his object in the first instance, he still more rarely escapes the fatal effect of pulmonary inflammation induced by irritation propagated from the larynx; and I did not forget that both the patients on whom I had performed the operation in question died from purulent effusion into the lungs. Instead, therefore, of cutting through all the muscles of the os hyoides, as had been done in the former cases, I resolved to retain the mylo-hyoidei and genio-hyoidei entire, and divide merely the attachments of the genio-hyoglossi. I also thought it would be better to perform the operation without chloroform, since the patient, instead of lying horizontally, might thus be seated on a chair, so as to let the blood run out of his mouth, and not pass backwards into the pharynx.

The operation was performed on the 29th, with the assistance of Mr. Annandale, Dr. Sewell, and Mr. Cheyne, to the first of whom I am especially indebted for his able co-operation. Having extracted one of the front incisors, I cut through the middle of the lip and continued the incision down to the os hyoides, then sawed through the jaw in the same line, insinuating my finger under the tongue as a guide to the knife, divided the mucous lining of the mouth, together with the attachment of the genio-hyoglossi. While the two halves of the bone were held apart I dissected backwards and cut through the hyoglossi along with the mucous membrane covering them, so as to allow the tongue to be pulled forward and bring into view the situation of the lingual arteries, which were cut and tied, first on one side and then on the other. The process might now have been at once completed, had I not feared that the epiglottis might be implicated in the disease, which extended beyond the reach of my finger, and thus suffer injury from the knife if used without a guide. I therefore cut away about two-thirds of the tongue, and then, being able to reach the os hyoides with my finger, retained it there while the remaining attachments were divided by the knife in my other hand close to the bone. Some small arterial branches having been tied, the edges of the wound were brought together and retained by silver sutures, except at the lowest part, where the ligatures were allowed to maintain a drain for the discharge of fluids from the cavity.

Next day I visited the patient, and finding him in all respects comfortable, inquired if he could swallow. In reply he pointed to a drinking-cup containing milk, and intimated that he wished it to be filled; then, placing the spout between his lips, while his head was bent backwards, he drank the whole without any cough or sputtering. Having seen this, I felt assured that the result would be satisfactory, and was not disappointed, as everything went on well afterwards. The only inconvenience experienced was from the edges of the jaw being occasionally displaced; but this was easily remedied by an ingenious contrivance of Mr. Wilson, the dentist, who, finding that a silver cap inclosing the teeth, was not sufficient for the purpose, fashioned a shield of gutta-percha embracing the chin on each side, and secured to the metal plate by a wire.

Under an ample supply of nourishment by milk, soup, and soft solid food, there was a rapid return of strength, so that an improvement in this respect was almost daily observable; and before the end of three weeks the patient declared that he had never felt better in his life. He returned to Manchester on the 23rd of January.—*Lancet.*

## SPHACELATED FEMORAL HERNIA FOLLOWED BY ARTIFICIAL ANUS—NATURAL CURE.

By S. J. Stratford, M.R.C.S., Eng.

Mr. William M., born at Morton Pound, Cornwall, England, aged 63 years, has been afflicted with inguinal hernia of the right side for upwards of ten years. It even descends into the scrotum, but is always easily reduced. Seven years since he observed a little lump appear on the right groin, in the situation of femoral hernia. It came suddenly, and was attended with a feeling of faintness and sickness; this by degrees subsided, but the swelling never entirely disappeared. After remaining quiet for a time, the part would suddenly increase in size, grow painful, at which time it was attended with constipation, pain in the bowels, and vomiting. This condition generally lasted for a few days, when the bowels would again operate, and the swelling diminish in size, and cease to be painful. He always believed that the constipated condition of the bowels was caused by the state of the tumor. The irritable state of the tumor generally happened several times during the course of the year, at which times it was generally preceded by a frequent desire to go to stool, tenesmus, and irritation of the lower bowel; then would follow the pain, sickness, and constipation. The inguinal hernia was never strangulated, would always return with facility, and never gave pain. For the last few years the patient had resided in the back woods of New Zealand, enjoying good health, but working very hard with heavy lifts and great exertion. Was obliged to leave his farm from the fear of Maorie marauders, who had killed in cold blood several of his unoffending neighbours. He came to Auckland in the month of July, 1863. In February last (1864) he was attacked with vomiting and purging, cases of which were very prevalent at this time. This complaint continued for several days; for it he took some composing pills, which had the effect of stopping the bowel complaint. The vomiting still continued with great pain in the bowels. After the purging stopped, pain commenced in the groin, the small tumor was enlarged, and his wife says became red and inflamed.

I was sent for on the third day, and immediately recognized the symptoms of strangulated hernia. The inguinal hernia was down; this I easily reduced, still the symptoms continued. The swelling, pain, and redness of the tumor in the femoral region pointed to the seat of the disease, which, however, at first sight, appeared more like an inflamed gland than a strangulated hernia. I now felt convinced that the man had a double hernia of the right side, and at the present time was laboring under strangulated femoral hernia. The swelling, redness, and

feeling of fluctuation in the little tumor, which was about the size of a marble, made me believe that changes of vital importance had already taken place in the hernial sac; so that I feared it was hopeless to expect to reduce the incarcerated intestine. An attempt was made, but it gave such pain that it was necessary immediately to desist, particularly as the history showed it had been irreducible for a very long period, the old man saying that it " never entirely went away."

From the urgent nature of the symptoms, I called a consultation, when it was determined to lay open the tumor and relieve the strangulation, if the hernia could not be reduced. With the assistance of Dr. McKinnon, 57th Regiment, and Dr. Wright, the tumor was laid open. The integuments and fascia having been cut through, the hernial sac was exposed, showing a dark plum-colored substance within. On the division of the hernial sac, a thin bloody serum escaped, and it was plainly shown that a piece of small intestine was adherent—vastly congested, amounting almost to a state of sphacelation. A cut was made into the neck of the hernial sac, so large that the finger could be introduced into the abdomen. All stricture was now removed from the intestine, the parts were brought together, and we hoped that the passage of the bowel might be established: not so—for notwithstanding the use of enemata, calomel, and opium, and castor-oil, the bowels continued obstinate, although the vomiting and pain had ceased soon after the operation. About four days after the operation, the intestine gave way at the groin, and a free discharge of feculent matter occurred, which greatly relieved the patient. This discharge, often thin and watery, continued for months; but the wound during this time gradually diminished in size, and became so small that it could be covered by the finger; indeed, at the present time you may see the feculent matter pressed through it, looking like the evacuation of an infant.

To-day (August 27, 1864) the patient said that he had eaten an apple, swallowed the pips, which after a time presented itself at the opening, and appeared arrested in the part, until an effort from behind forced it out with some violence.

A few days since the man informed me he had an inclination to go to stool by the natural passage. I advised him to use the enema. He did do so, and found considerable stool to pass, and now he declares that he has two stools daily without the use of the glyster. The wound in the groin is getting less daily, and I have no doubt will completely heal up, and the natural passage of the bowels be re-established. The man is in good health, takes long walks, and is very anxious to go to work.

The unexpected result of this case calls to my mind circumstances

which happened to me when in the backwoods of Canada some twenty-five years since. An old man, of some 50 years of age, vaulted upon a horse to ride a short distance. In the act of mounting he felt a pain in the right groin, and observed a small tumor; was seized with pain in the bowels and vomiting; was put to bed; had some warm drink given him, and hot fomentations applied to the bowels. These means did not relieve him; he grew worse, and I was sent for during the night. When I arrived I found that he was laboring under the symptoms of acute strangulated hernia. The tumor in the groin was about the size of a marble; was very painful to the touch, and he declared it came suddenly. He had observed it occasionally some long time ago, but recently it had not troubled him. The taxis was tried, but the tumor was almost too small to handle. Bleeding and the hot bath were tried. (Chloroform was not known in those parts at that time). The symptoms speedily became so urgent that I resolved to operate. I laid open the integuments, divided the fascia, and opened the hernial sac. I found a portion of small intestine caught in the hernial embrace, and evidently strangulated, by its dark color. It was plainly only a section of the intestine, one side of it incarcerated in the hernial sac. I now divided the stricture, and placing my finger upon the bowel I easily pushed it into the abdomen, when the poor man expressed a desire to evacuate the bowels, which acted freely. The wound soon healed, and the man got rapidly well.

Upon reflection, I am led to believe that this very remarkable case of sphacelated femoral hernia above mentioned was of a similar character to the one just recorded. A section of the bowel only had come down into the sac and become adherent, and that the stools passed through the intestine, while this section was adherent to the hernial sac. Whenever irritation of the bowels happened, which seemed frequently to occur, more or less inflammation of the part resulted, but quickly subsided again. The last attack was far more violent than any of the preceding, hence the inflammation of the intestine was more intense, and caused all the symptoms of strangulation, and made it necessary to relieve the stricture. This being accomplished, the symptoms of incarceration subsided, but the vitality of the intestine was too far gone to permit it to regain its tone; hence mortification ensued, and an artificial anus was formed. As the irritation and swelling of the parts subsided, the old man began to regain tone. His health was considerably re-established, the wound commenced healing, and the feculent matter began to find its way into the lower portion of the bowel past the wound by the section of intestine not included in the hernia.

The more the wound healed the more free was the passage by the bowel, until now scarcely any matter passes by the wound, and the

artificial anus is almost closed, and without doubt will be perfectly cured.—*Med. Times.*

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## Medicine.

### ON THE DISEASES OF THE SKIN, CAUSED BY THE ACARUS.

By Balmanno Squire, M.B.Lond. Surgeon to the West London Dispensary for Diseases of the Skin; Lecturer at St. Mary's Hospital Medical School.

The effects produced by the presence of the acarus in the epidermis are—*Itching*, aggravated towards evening, in some cases felt only in the evening, and even then but slightly, but in others severe enough to deprive the patient of sleep and rest during the first half of the night. The itching and the scratching that it provokes are to some people not altogether disagreeable. I have noticed that those who describe the sensations produced by scabies as agreeable are usually persons of lymphatic temperament, while to persons of nervous temperament the disease is always tormenting.

One of the diseases that results from the irritation of the acarus is *Prurigo*. By this I mean an eruption of papules (discrete, not confluent) attended with considerable itching of the portions of skin on which they appear; this itching leads to the excoriation of their summits by the patient's nails. They have been described by Willan and Bateman as papules, with vesicles on their tops; but this is an error, since the small drops of serum which exude from the torn apices of the minute pimples are not covered by any layer of epidermis. The prurigo of scabies differs from the ordinary prurigo of old persons, in that the papules are smaller; that the secretion from these summits is sanious serum, rather than blood; that they are more numerous on a given extent of surface, and that the minute crusts which result from the drying up of the fluid that exudes from them are more florid. The usual situations for this pruriginous eruption are the inner aspect of the forearms, the belly, and the inner aspect of the thighs. In the great majority of cases of scabies this papular eruption is present.

Another disease of the skin produced by the acarus is a *vesicular* eruption. The vesicles vary in size from that of a small pin's head to a large bleb. They are seen more commonly on the backs of the webs of the fingers, and on the sides of the fingers, on the back of the web of the thumb, on the palm of the hand, on the anterior aspect of the wrist, and on the feet. The vesicles are absent in about twelve per cent. of the cases of scabies that come under observation. A fair idea, both of the vesicular and the pustular eruptions of scabies, is conveyed by Part IV. of the author's published series of photographs of the diseases of the skin.

A *pustular* disease of the skin is a common result, too, of the presence of the acarus. This eruption I have observed more commonly in the lymphatic and the debilitated. It may be observed on either the hands, the feet, or the nates. The pustules when situated on the hands or on the feet, are of the same average size as the vesicles, but on the nates they often resemble small furunculi. I have even seen small abscesses on the nates of children, due entirely to the irritation of the acarus.

It is by no means uncommon to see patches of *eczema* or of *impetigo*, as the result of scabies; these occur more frequently about the wrists, in the flexures of the elbows, in the axillæ, about the ankles, in the hams, or (in the female) on the breasts.

There is another disease of the skin which the acarus may give rise to —when I say may give rise to, I do not merely mean may reëxcite, but may cause to appear for the first time—and that is urticaria. This, I believe, has not been noticed by any other author. I have seen very severe urticaria form the principal feature of cases which, on careful examination, I have found to be cases of scabies.

Besides the above detailed eruptions, there is another symptom of scabies, which, though less obvious than any of the preceding, is of infinitely greater importance, since it is not only most constantly present, but once recognized is pathognomonic of the disease. The symptom referred to is the track, left by the female acarus in its passage through the substance of the epidermis, the *acarian furrow*, as it has been termed. This presents the appearance of a curved dotted line under the surface of the epidermis, varying in length from the thirtieth to the third of an inch, and assuming the form of a comma, of a horse-shoe, or of the letter S. It may be either white or of a greyish colour. At one extremity of the furrow is a minute, rounded, opaque, white elevation, the "acarian eminence;" from this, with a little address, the acarus itself may be extracted on the point of a pin. It is, however, easy to detach small pieces of epidermis, of about the size of an acarus, where no acarus is present, and I have often seen this mistake made. The itch may be distinguished from fragments of epidermis by several tests; of these the most unequivocal is to place the suspected atom under the microscope, when the well known anatomical characters of the acarus (if acarus it be) will at once reveal themselves; but the microscope is an instrument that we may not have always at hand, and in its absence there are other tests which are scarcely less certain. Thus, if the point of the pin to which the particle adheres be held up to the light, if it be an acarus, the atom will have a semi-transparent and plump appearance; if it be a piece of epidermis, it will look opaque and shrivelled.

An acarus, if placed on a piece of coloured paper and breathed upon, will be seen to crawl along the surface. If it be placed in the flame of a candle, a faint explosion will be heard; this is owing to the soft, semi-fluid body of the acarus being enclosed in a hard, shell-like skin, which bursts under the pressure of the steam generated within; a piece of epidermis on the other hand, noislessly shrivels up. Scabies is most frequently met with amongst the poor, but is much commoner among the middle and upper classes than it is popularly supposed to be. It is more common with children than adults. It rarely attacks the face or scalp. Its only cause is contagion.

As to the manner in which the contagion of scabies operates, it was formerly supposed that the fluid contained in the vesicles, which appear on the hands and feet, was the source of contagion, but actual experiment has supplanted this theory. Several persons were inoculated with the fluid taken from the vesicles of scabies, and not one contracted itch, whereas a single acarus taken from a furrow was found to be always capable of communicating the disease. It has been thought by many that scabies is ordinarily communicated in this way; but I think it is more reasonable to suppose that it is caught from the ova of the acarus. As the female tunnels her way through the substance of the epidermis, she makes from time to time small air-openings to the surface; the ova that she lays can readily escape by these apertures, and, owing to their extreme minuteness and lightness, adhere readily to any soft substance with which they may be brought into contact, so that it is more probable that the disease is communicated in this way than by means of the female acarus, who rarely, if ever, leaves the tunnel.

*Treatment.*—If there be much inflammation, it is advisable to defer specific treatment for a day or two, and to have recourse, in the interim, to laxative and refrigerant medicines, and to emollient baths. The specific treatment should be commenced by a thorough soaping of the skin, from the neck downwards, followed by a warm-bath, after which the following ointment should be well rubbed in over every part of the body, excepting only the face and scalp:—℞. Potass. carb. ʒ ss. sulph. sublim. ʒ j., hydrarg. bisulph. gr. ij., ol. bergam. m. iv., adipis. ℥ j. This process should be repeated every fourth day, till it has been undergone three or four times. After the ointment has been applied, fresh linen should be put on, but the same linen should be worn next the skin day and night, till the next application. At the same time care should be taken to disinfect all the patient's clothing, by subjecting it to a temperature of 200° Fahr. This may be done by boiling the linens, and ironing out the other clothes. —*Med. Mirror.*

# Canada Medical Journal.

MONTREAL, APRIL, 1865.

## LUNATIC ASYLUMS.

A letter, copied from the *Montreal Herald*, appeared recently in the columns of the *Montreal Gazette*. The editor of that journal assumes it to be written by "a person who evidently understands the subject of Lunatic Asylums." We should say his acquaintance is not thorough, and would recommend that he be sent to one for an indefinite period to improve his knowledge of the requirements of such institutions. There is no necessity for the Government of Canada seeking for a site with a mansion already built, supplied with hot air furnaces, water accommodation, and extensive out-buildings, ostensibly for a Lunatic Asylum. A building for the use of lunatics should be constructed expressly for the purpose intended, and no second hand make shift should for one moment be thought of.

As well might we expect the Government to buy up all the old, worn-out buildings in various parts of the country to serve the purpose of Court-house and gaol. A Lunatic Asylum is not a charity. It is an institution as essential to the well ordering of society as is a Gaol. Many, we might say the majority of cases of insanity are superinduced by evil habits, indulged in possibly for years. The unfortunate victims, in many instances, become so enslaved by the particular vice, as to lose all moral power of self-restraint, and the result is in the end, if not death, destruction, or it may be only temporary disturbance of the powers of the mind. Such is undoubtedly the case with the habitual drunkard—a state well recognized in the present day as one of mental derangement, and one which society is bound, for its own security, to endeavour to arrest by all legal and benevolent means. Cases daily accumulate in which the most wretched crimes have been perpetrated under temporary insanity through drink; and, on the other hand, abundant evidence is obtainable of the permanent benefit to habitual drunkards of isolation and appropriate treatment. How far society is answerable for the neglect of these wretched beings we are not prepared to argue, but unquestionably it

becomes a serious consideration whether it is not a duty to restrain the habitual drunkard, not by pledges or temperance societies, not by Maine liquor laws, or heavy duty on liquor, but by regarding the habitual drunkard as mentally deranged, and condemning him for a time to isolation and care in an asylum specially devoted to his class. A Lunatic Asylum is needed for this section of the country. We regret to be *again* obliged to inform our Government that we are yet without such an institution, and *again* to reiterate the fact (which has been stated time after time for the last twenty years) that the condition of the lunatics in this district, in the cells of our common Gaol, would disgrace the natives of Timbuctoo. The treatment received by Dr. Howard, the medical superintendent at St. Johns, whose efficiency has been acknowledged by the inspectors in their last report, has been simply disgraceful, and we would not be at all surprised were that gentleman to relinquish his charge in disgust.

With regard to locality we cannot see the advisability of placing the institution at an unreasonable distance from our city. Montreal is the centre at which several railways converge, and in summer time is more accessible than any other place we know of from all parts of the surrounding country. There are here two medical schools unsurpassed by any in Canada. In an educational point therefore it is essential, at least expedient, to afford every facility, to those who in a few years must supply our places, to study disease in its various phases. Diseases of the mind, as of the body, are engaging the serious attention and study of the profession at the present day. Many cases of insanity which a few years ago would have been considered hopeless, are now well known to be amenable to treatment. The symptoms are found to yield rapidly and readily when appropriate means with promptitude are employed. What physician worthy of the name, would look supinely on and permit an acute attack of disease to proceed to the sure destruction of his patient, or run into the chronic form, without an attempt on his part to arrest its progress? This argument equally applies in diseases of the mind as of the body. Secondly, we hold it to be a duty of communities to provide the means for the safe conduct and appropriate treatment of disease, especially those affecting the mental condition of individuals. Here we have to deal with no ordinary form of disease; and unless the patient be, so to speak, isolated or removed to a suitable establishment, especially devoted to the care and treatment of these unfortunate cases, he will either die, or the disease become confirmed, the patient for ever after remaining in a hopeless state, with occasional exacerbations and remissions, a burthen to his friends or the community.

## THE VACCINATION ACT.

This Act, assented to on the 18th of May, 1861, and which requires the councils of each of the following cities, Quebec, Three Rivers, St. Hyacinthe, Montreal, Ottawa, Kingston, Toronto, Hamilton, and London, and the town of Sherbrooke, within three months after its passage, to appoint public vaccinators, who, at least once a month, are required to vaccinate all those who present themselves (those unable to pay being vaccinated gratis, and the council paying the vaccinator twenty-five cents for each person thus operated upon), has, so far as we have been able to observe, been a dead letter, except in our own city of Montreal. In Quebec, we believe vaccinators were appointed, but we have not been able, though watching somewhat closely, to find any mention of what success, if any, followed their appointment. This Act, though in our opinion deficient in some respects, is a most important one, and the defaulting cities are deserving of censure for having so long delayed putting it in operation. Let our brethren in those cities bring the Act under the notice of the local authorities, and let not the matter rest till its provisions are being thoroughly carried out. It is impossible to over-estimate the beneficial results which would follow a rigid enforcement of even our present Vaccination Act; for it must be the experience of every medical man in Canada, that there are thousands who reach the age of boyhood, and even manhood, without having been vaccinated. How fatal small-pox is when the unprotected are attacked, needs not our pen to tell. Parents in many cases do not realize the great responsibility which rests upon them when neglecting to subject their children to the action of the cowpox. In the mother country this responsibility has been brought home, in more than one instance, in a way anything but pleasant, though we believe a few such examples would do not a little to cause every mother to have her children vaccinated within a few months after birth. We give an instance: Not long ago, Dr. Lankester, the Coroner for Central Middlesex, London, held an inquest on the body of a child, two years and a half old, who had died from small-pox, and who had never been vaccinated. Two other children in the same house, also not vaccinated, had contracted the disease and died. In evidence it was proved that the parents had been served with a notice to have their children vaccinated, which they had neglected to attend to. A verdict of manslaughter was the result. The subject of vaccination is a most important one, and we trust our readers will not fail to impress upon their patients the absolute necessity which exists for their children being vaccinated at an early age. Our attention was drawn to this subject by the presentation to the City Council of Montreal, on the 16th of March,

of the report for the year 1864 of Drs. Leprohon, Ricard, and F. W. Campbell, public vaccinators. This was the third year of their appointment. From the report we learn that during the year 1864 the number of 1403 persons were vaccinated by them in their public capacity, being an increase of 861 over the previous year. This increase is attributed to the distribution of small handbills in every house in the city, giving a synopsis of the Vaccination Act, which distribution was done by the Police Force. "Vaccination is the best known preservative of human life against the contagion of small-pox, and although it has not prohibited children in all instances against a modified form of variola, it is generally successful, and humanity and sound experience alike, call for its continuance. At present the practice of compulsory vaccination is rigidly enforced in most cities in Europe and the United States. * * * * It should also be remembered that whenever small-pox occurs in a family or neighbourhood it is important that all individuals in regard to whom there is any doubt or uncertainty as to the fact of their having been successfully vaccinated, should be immediately subjected to the operation, this being the most certain means of preventing the spread of variolous contagion. Another matter to which they would beg most respectfully to draw the attention of the members of the council is the great deficiency in the statistics of mortality for this city. Montreal, with its large population, should adopt a more scientific method of registration. As now obtained the returns of mortality are comparatively useless with regard to the various causes of death; and if a by-law to that effect were passed, it would have the most happy results, and the physicians of the city would cheerfully comply with its requirements. In Great Britain a most accurate system of registration has been carried out, which is of the greatest use to the public health and sanitary reform. Montreal shall not remain so far behind hand in a matter so important."

This subject of registration is a most important one, and we earnestly hope our City Council will, ere long, move in this matter.

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We regret to have to chronicle the death of Alexander Long, M.D., formerly of this city. The sad event occurred after a short but severe attack of pneumonia, at his residence, Bruce Mines, C. W., on the 23rd of February last. Dr. Long was well known as a most skillful, practical anatomist, having acted for several years as prosector to Dr. Hunter, of Glasgow. He received the license of the Faculty of Physicians and Surgeons, Glasgow, somewhere about the year 1841 or 1842, and subsequently came to this country. He graduated at McGill University in

the year 1844; and was House Surgeon Montreal General Hospital for several years.

Dr. Long was exceedingly diffident, modest, and retiring, but with all thoroughly honest. His manner was kind, but not prepossessing, and he possessed rare qualities as an anatomist and surgeon. For several sessions he acted as Demonstrator of Anatomy in McGill College; and the College Museum was largely enriched by his painstaking perseverence in his department as Curator to that collection. He leaves a widow and four young children to deplore his untimely removal.

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## RE-SECTION OF THE ANKLE-JOINT.

Since our last issue, we have received a communication from Dr. Caniff, of Belleville, enclosing a copy of the London *Lancet*, containing a letter forwarded to that journal, previous to our existence, detailing the final result of a case of re-section of the ankle-joint operated upon by him in 1862, and reported in the *British American Journal*, for June, 1862. At that time Dr. Caniff promised to give the final results, and, two years after, finding no medical journal in existence, he was obliged to forward his communication to the *Lancet*. The person operated upon was twenty-one years of age, with a good constitution, and the disease of the bones was due almost entirely to local causes. The operation was performed as follows: A single incision having been made, the following pieces of bone were successively removed: first, the astragalus, one half of it necrosed and the other half disorganized; then the external malleolus, then half an inch sawn off the tibia, but the condition was such as to require an additional inch and a half of both tibia and fibula. The upper half of the os calcis was removed by the gouge; about three inches of bone in length was removed altogether. The leg was put up in a fracture box and the patient did well. Six months after he could walk with the aid of a cane; and a year after he could run with ease; and Dr. Caniff on one occasion saw him mount a flight of stairs three steps at a leap. There is just two inches of shortening, and the patient wears a boot with the sole thickened about three quarters of an inch; the ankle is supported on either side by steel springs, and he walks with a very slight limp. Dr. Caniff claims that he was the first to perform this operation in America, and seems to think Dr. Johnson, of Buffalo, whose article we re-published in our last issue, makes a similar claim. We have examined Dr. Johnson's article carefully, and finding no specific date given when the operation was performed, are not competent to decide the question. It seems to us both Dr. Johnson and Dr. Caniff must have

operated about the same time. To settle the matter, would Dr. Johnson, through the *Buffalo Medical Journal*, give us the date on which he performed his operation.

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## TYPHUS FEVER.

This disease in its most malignant form has for a number of months been epidemic in Scotland and Ireland. At Dundee, Aberdeen, Falkirk. Glasgow, Greenock, Dublin, Cork, it has carried off hundreds, among them we regret to say, not a few of our own profession who contracted the disease in the course of their professional duties. As the approaching season will doubtless see a number of emigrants reaching our shores, sailing from the Clyde and Irish ports, where the disease is now prevalent, we trust our authorities at Quarantine will examine closely all vessels coming from any affected port. If the disease was to become prevalent with us, during our hot summer weather, which will be soon upon us, we would have great cause to lament our want of forethought. Prevention is better than cure.

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Our attention has been drawn to the fact that two graduates of McGill College are, and have been for some time, violating the solemn affirmation they took when they received their degree. One is in partnership with a well known quack, and the other guilty of a constant disregard of the rules of medical ethics. It is our intention to take up this matter at length at an early day, when thoroughly acquainted with the facts; in the meantime we would observe, we think measures should be taken to give Universities the power to withdraw their diploma from those who so unworthily use it. Nothing is so disgraceful, as to knowingly deceive the public, for the sake of paltry gain. They forever lose the respect of their old classmates, and must, eventually, lose that of the public also.

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## MEDICAL NEWS.

Tom Thumb's baby, according to the London *Lancet*, when in Paris recently, was twelve months old and weighed seven pounds and three quarters. — Sir David Brewster, the veteran philosopher, so highly distinguished for his optical discoveries, read a paper before the Royal Society of Edinburgh, on Monday, 16th January, "On the Causes and Cure of Cataract." He showed the differences between the various forms of cataract, as determined by the composition and structure of the crystalline lens, and suggested that in cases of soft cataract a cure might be effected by injections of albumen into the lens.

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Valedictory Address to the Graduates in Medicine, on behalf of the Medical Faculty of McGill University*, delivered at the Annual Convocation, held in the William Molson Hall of the University, on the 3rd of May, 1865. By WILLIAM SUTHERLAND, M.D., Professor of Chemistry.

A new chapter in the drama of your life opens to-day, of which the four preceding years have been the prelude and the rehearsal. The privileges and the franchise of your profession just conferred on you imply certain qualifications; of these your studies and your successful examination are at once the warranty and the test. It is thus with these surroundings that your entrance upon your career is inaugurated, attended with customary ceremonies and accompanied by general good wishes.

Your medical studies have extended over four years of continuous uninterrupted labour, and they have been systematically imparted—practically and clinically enforced and applied. In a word the whole domain of your profession has been investigated, examined and explored. Your final examination has satisfied your teachers that you are in every way competent to undertake the management of cases for yourselves. This examination furnishes trustworthy testimony that your time has been well spent and applied; but while this is unquestionably true, such proficiency as an examination establishes is not the only, perhaps not the chief, condition of success in life. It cannot establish what any one is capable of doing on an emergency, or how he will act under difficult or trying circumstances; neither can it make known moral qualities, sense of honour, or even temper. You will soon discover that with the best intentions and disposition you will be valued, not by feeling nor by deference to your profession as such, for this age is marked by the decay of respect and reverence, and to day, as in the time of Pyrrho, it is easy to coin a new word likewise borrowed from a name ending with O, significative of uncertainty and doubt. You will be valued by the conduct

which you pursue, the good which you effect, and the position which you maintain. Society expects every one of its members to do his duty—and even when performed, awards often scant praise therefor. And not to be purely temporary and transient, you will soon learn in your career that your success must be unequivocal and frequent; that you will have by your life to contradict or outlive much censoriousness and disparaging criticism, before you attain a fair position among your confrères, and perhaps that may only be reached with declining years and decaying mental energy. But inasmuch as there is seldom genius without that real strength of mind and capacity of endurance which can afford to bide its time, and in the end carry the day—the fruits for which you may have toiled may be reaped, and reputation, perhaps fame, may be achieved at a relatively early age. Work therefore, be patient, be hopeful, trust in your abilities, natural and acquired, feel "that all as in some piece of art is toil, co-operant to an end;" and if success should reward your efforts, regard it not as being evidence of personal merit,—nor be exalted thereby—or at the most be tranquil and humble in your exultation; it will not last long: soon you will have to give place to others, and quickly drop aside and be no more seen.

From the public in general your studies receive little attention and interest, inasmuch as they offer no attractions, other than those in some obscure way, connected with ancient errors and modern charlatanism. But the medical man must be cold indeed who rises from a review of the subjects which form the basis of your study, without enthusiasm bordering on almost extravagance. Of created things is there one equal to man, or even like unto him in conception or execution of design or effect of purpose? Does not his organisation surpass that of all others, and a knowledge of it in its multiplied relations far transcend all other phenomena? Who or what ranks higher in the scale of creation? In whom and in what are embraced and compressed as it were such marvellous adaptations, such moral interests, such psychological mysteries? wherein else do we so clearly distinguish "direction which we cannot see," even as by refraction we see the sun before it has risen above the horizon? Are the demonstrations of anatomy then, as has been said, "mute and frigid," because made on the inanimate body—the tenement of clay? mute! are not all its parts vocal to you, have they not significance—frigid! do they not always excite and kindle even in the dullest, the disposition to prosecute them even by running counter to law, and incurring the odium which society unjustly expresses. And what are these demonstrations and revelations? The frame-work of the bones—to which and round which clings the mechanism of the muscles and tendons, the distribution and arrangement of the nerves from foot

to crown, the two clearly, closely connected and related,—the organs of movement and sensation. If from a mechanical glance we pass to the contemplation of this same fabric moved and actuated incessantly by the powers of life—working by and through it, and showing how all its parts are ends and means—causes and effects—for the accomplishment of its purposes—all must acknowledge that herein is a subject with which none can be brought in comparison. The apparatus of the senses presiding over perception, the avenues to knowledge; the mutual inter-dependence of the various organs, so related by proximity and by function, that if one be ill the others feelingly are made to participate. The network of blood vessels penetrating everywhere, carrying in their tide the rich materials wherefrom the system is developed, nourished and maintained—a perpetual addition compensating for a perpetual abstraction of particles, so that an absolute equilibrium is secured. The individual is the same, but its parts come and go—are created and destroyed. While this matter is a portion of the body, it is subject to certain laws; but after it is let loose it may circulate about the universe in any other form. The poet's dream, then,—

> "There's not one atom of yon earth
> But once was living man,"

is not an exaggeration but the expression of a philosophical fact. Concurrently with these chemical formations and evolutions, an amount of heat is uniformly generated throughout the body, and so regulated that whether in polar or tropical climate, temperature is at the same degree:—meantime those spongy tenements of the breath, the lungs, from the first wail to the expiring moan, incessantly pour into the air the vitiated, the poisonous, final product of oxidation, and restore by each inhalation an unadulterated equivalent of a gas instinct with vital properties, charged with superhuman powers; and thus it is that life in its varied relations is a permanent influence over a perpetually changing set of particles.

But all this is well known to you,—it is like a thrice told tale,—the faint echo of what has been forcibly proclaimed elsewhere. I am open to the criticism, and incur its consequences, because it is advisedly that I thus venture to recal in broad and comprehensive, but I fear feeble outline the fact that by an intimate acquaintance with the normal of healthy life you will best understand that life when its normal shall have been deranged, and best apply the means calculated to arrest, defer, or avert the threatened danger. It is moreover this assurance of your ability to meet and cope with that danger which removes anxiety from the minds of your teachers on your entering upon your independent manhood, uninfluenced and untrammelled by dogma, or special doc-

trine as meaning servile subjection to authority—but simply directed by the principles and education which make you masters of your subject, and which guiding individual judgment will find their most successful application in the exercise of thought and action, in the avoidance of indifference and listless routine, in evoking that independence, not of manner, but of character, which stands firm in difficulty without leaning on other men's shoulders, and which, properly regulated, is the opposite of that self-assurance which leads to and essentially is presumption, arrogance, and obstinacy.

In your professional as well as in all other relations there will be much to cause anxious, harassing, even tormenting thought; much, too, on the other hand to produce pleasant, cheerful, and self-gratulatory feelings; fortunately by far the greater number of your cases in ordinary circumstances will afford no matter for grave consideration, but even then never permit your perceptions to be thrown off their guard, for danger may lurk where least expected: and in occasions of this kind you will now and then be made to smile when you see reproduced identity of feeling and temper even after the lapse of thirty centuries; some patients, like Naaman, will turn and go away in a rage because you may not have said or prescribed "some great thing." Indeed you will meet humanity when ill, in its feeblest and in its noblest and most heroic manifestations. Now, there will be timidity, ingeniously self-tormenting, with remote and improbable contingencies; now, there will be hopefulness, endurance, fortitude, cheerfulness even under suffering and in the midst of very danger, and resignation on the approach of death; and in some fortunately rare cases it occurs that the opinions and the words of the medical man exercising his matured judgment, are painful to those who are by affection or otherwise related to the suffering one—when his accuracy shocks—when his candor seems pitiless, and his truth causes a dread, and produces an almost abhorrence to the afflicted. To the first of these you can give every support,—they require it,—and it will effect its good ends; the second scarcely ask for, but nevertheless always receive, sympathy in large measure; to the last,—for you have here to do with relatives and connections, no form of words or set phrase can bring consolation in the presence of the woe which your art has been unable to avert; the faculties are stunned—attention and perception are in chaos—mechanically and listlessly grief listens and moves; despairingly and almost rebelliously utter oblivion is deemed the only refuge; words however toned and expressed, would fall on deaf ears and be simply impertinent; to these humble acquiescence and resignation must come from other sources than yours.

I have far exceeded the limits which I prescribed to myself when I began this address. I hasten to a close. In your relations with each

other as medical men, remember that you are not rivals, but co-labourers; that you act in harmony, not in opposition; that you are influenced by principle, not by narrow views; that your duty ought to lead to one single constant purpose, before which all considerations even of justifiable ambition and love of praise and thirst of reputation should sink in significance,—that purpose the good of your patients. Though common and perhaps natural, it is nevertheless disingenuous, and on a lower moral ground it is a blunder and impolitic to refuse to perceive, or recognise, or admit intellectual strength wheresoever it may exist.

To disparage is easy enough; and to attempt to reduce another to one's level by such means may be tempting, and perhaps brings with it some consolation for one's littleness; but surely, to raise one's self to the equality of our superiors, and even try to excel them, is a better and more worthy competition: to persist in the opposite course is to be actuated by what I must be pardoned for calling a principle from the code of prigs and snobs and the evangel of knaves. Is there not higher authority than mine for "Sirs, ye are brethren; why do yet wrong one another?" Λαμπαδια εχοντες διαδωσουσιν αλληλοις—the light shines everywhere, yet clouds occasionally lower upon us—let us hold the lamp the one to the other in the dark places.

Remember, too, that it is quite possible, nay common, for one's abilities to be rendered useless, talent barren, and even contemptible, without that rectitude which, more than man's capacity, talent, or genius, is his greatest virtue,—his victory over his prejudices, his propensities, appetites, passions, vices,—his character.

And these honours now conferred on you, as you have earned them well and faithfully, may you wear them long. So shall Alma Mater send out her sons skilled and worthy into places now under familiar, now under strange skies, to spread abroad the science and manhood and character, which she has endeavoured to teach and educate; and with the increase of years, and after a life's long vigil, may those honours still be unsullied—manhood be irreproachable, and character unimpeachable.

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*False Anchylosis of the Lower Jaw, of some twenty-four years standing; relieved by free internal incision, and subsequent continued motion, active and passive.* By William Canniffe, M.D., M.R.C.S., England; formerly A. A. Surgeon to Her Majesty's Forces; late Prof. Surgery Univ. Vict. College, Toronto.

Immobility of the lower jaw is said to be an affection peculiar to America; and has been attributed to the free use of mercury, which was

so fashionable some years ago. The profuse salivation, ending in ulceration of the cheek internally, finally resulted in rigidity of the parts, especially the masseter muscle, whereby the jaw was permanently closed. That the disease is not known in Europe, seems to be substantiated by the fact that no mention is made of it by English writers at least. That it is due to salivation, seems to be corroborated by the case we purpose to relate. Dr. Mott of New York was the first writer to treat particularly of the disease; and to perform an operation for its relief. His first case is recorded in the American Journal for Nov., 1829. When a student in New York in 1853, I saw Dr. Mott perform the operation by introducing a narrow bistoury by the mouth, and dividing the masseter muscle, and then with a screw and lever, he forcibly opened the mouth. The result was satisfactory.

The case I am about to give, it will be seen, was something more than simply a rigidity of the masseter muscle.

Miss P. consulted me last fall respecting her face, which was to her a source of great annoyance and pain. The account given by herself was as follows: When about two and a half years old, she chanced to get hold of a box of mercury pills, a number of which she ate. The same day she accidentally fell into a drain, getting herself quite wet; the following morning her face was swollen and sore. In a few days ulceration commenced on the inner surface of the left cheek. This gradually extended, until the whole thickness of the cheek was involved, and finally, in about ten weeks from the time she swallowed the pills, a large portion of the cheek fell off (no doubt a gangrenous portion which had just become detached), leaving a space the size of a penny piece. The mouth remained intact. The healing rapidly progressed, and soon closed up the space in the cheek, but at the same time completely locked the jaw. From that time to the present, some twenty-four years, the mouth has been firmly shut; so closely indeed that once she got a pin between the teeth into the mouth, and had great difficulty to get it out. And she has a horrid remembrance of Christmas day, when twelve years, having two of her teeth come out in the mouth, which she held there all day, and which she only at night determined to swallow, lest they might choke her while asleep. When nearly five years old an operation was attempted to secure mobility of the jaw. She says the soft parts were thoroughly divided from the jaw bones, but the object was not accomplished. Again, when about fifteen the operation was repeated by another surgeon, which also failed. Five years ago the face became swollen, and an abscess formed in the left cheek, anterior to the cicatrix. This opened inside the lip at the left corner of the mouth; the part again healed. Last August

an abscess again formed in the cheek, which opened upon the surface in the site of the original cicatrix. Since that time the cheek has never been quite free from swelling; also there has been an occasional collection of pus. It is this continued discharge which has led her to consult me.

Upon examination I find the left cheek somewhat swollen, and very considerably widened, so that the mouth is turned to the right side to the extent of nearly an inch. The formation and healing of the abscesses, has no doubt contributed to produce this. The jaws are most firmly closed; she says, however, that there is a very limited lateral motion of the jaw on the right side. The upper front teeth are somewhat projecting. Thereby it was that a certain quantity of solid food could be introduced to the mouth. The cavity of the left cheek is entirely obliterated up to the very corner of the mouth. Notwithstanding the immobility of the jaw, she could articulate with perfect distinctness.

I recommended another effort to divide the parts as offering the most probable permanent relief. After some days' consideration she determined to submit again to the use of the knife. The operation was performed on the 24th October, 1864. I was ably assisted by Dr. Burdett and Dr. Relyea, dentist, whose advice had mainly caused her to undergo the operation. Chloroform was administered. It would be more agreeable to relate that the operation was completed at this time. But unexpected difficulties were encountered. The fact that she could even slightly move the jaw laterally had led me to think that the knife could readily divide all the structures holding the parts together. But, after thoroughly separating the parts, including the masseter muscle, no available force could be found to part the jaws. The reason soon became apparent. They were firmly united by fibro-cartilaginous bands which gave thickness to the periosteum, and fitted closely around the teeth. And, in growing, they had assumed a very irregular position in the jaws. At the posterior part there was also a quantity of calcareous matter. The operation, therefore, had so far again failed. But we were not discouraged. A week after, the patient willingly allowed us to continue the operation. During this time union had been prevented by the introduction of a tent supplied by Mr. Relyea; with a good assortment of instruments for working around teeth, and a fine metacarpal saw, and the patient placed under chloroform, the operation was resumed. A strong scalpel was first used to divide as much as possible of the strong bands; then the somewhat pointed instruments were employed to sever the substance around and among the teeth. Finally, the saw was made to traverse the space between the jaws; while, at the same time, leverage

was used to separate them. The saw completed the work and the jaw then readily opened to the extent of nearly an inch. On both occasions the hemorrhage had been considerable, but no important vessel was divided.

The operation had proved troublesome, but it was a small thing in comparison with the treatment which subsequently had to be pursued. In undertaking the operation it was fully understood that subsequent to dividing the cheek from the bones it would be necessary to interpose something for a long time, until the fresh surface had gradually become skinned over by a membrane; and that if this were not done the parts would re-unite and the undertaking prove futile. In addition, it was found necessary to have the jaw opened frequently by mechanical means; at the same time to cause the patient to strive often to open it by muscular action, thereby to call into action certain functions of the muscles which had been so long a time dormant. It was necessary to have something placed between the cheek and the jaws that would be cleanly and unirritating. Having mentioned this to Dr. Relyea he suggested a plate of vulcanized rubber. So, having prepared a model for him, he supplied me with what proved to be a valuable agent. It was an oval concave-convex plate of a quarter of an inch thickness. The introduction of this caused considerable pain; but it was far more comfortable than the tents previously in use. After a few weeks this could be taken out and replaced without any great trouble or discomfort. To maintain and, if possible, increase the motion of the jaw, the patient was instructed to insert wedges of wood daily, and to gradually increase their thickness; to occasionally use a lever; and incessantly, in her waking hours, to exercise the muscles in opening the jaw. The inflammation from the first was controlled by the application of cold water. The discharge was, for some time, considerable, and consisted of pus; the *débris* of the cartilaginous structure and calcareous matter. After a few weeks some of the alveolar process came away and even a small portion of the lower jaw. For five months the use of the plate was continued, but its form and size had occasionally to be modified. Gradually the cavity assumed the appearance like unto nature. The tendency to heal by adhesion was strong, and the contractions would, to a great extent, force out the plate. During the last month, indeed, it could hardly be resisted. The ultimate object kept in view was to secure a space in the cheek sufficiently extensive to allow the jaw to be opened to the fullest extent. But the work was cut short by an attack of erysipelas commencing in the part and extending over the face and to the scalp. The plate had to be removed, and when the inflammation had subsided, and the interior of the cheek could be

examined, it was found that where a covering had not yet formed, union had taken place. Fortunately, however, a sufficient cavity had been secured to allow the jaw to be opened rather more than an inch. During the past fortnight the mobility has somewhat increased. The *result* now is a complete removal of external deformity, the mouth being no longer turned to one side, and the cheek presenting a natural appearance. The patient can eat with comfort; and, what she prizes very highly, can clean her teeth within the mouth, a luxury to her before unknown. Also, she can speak far more fluently.

Belleville, 14th April, 1865.

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## REVIEWS AND NOTICES OF BOOKS.

*Answers to the Various Objections against Acupressure, or the Temporary Metallic Compression of Arteries*, adduced by Professors Miller, Erichsen, Neudörfer, Spence, Fergusson, and Syme. From Dr. Simpson's work on Acupressure, pamphlet pp. 34, from the author.

We have to thank Professor Simpson, Edinburgh, for a copy of this reprint from his work on acupressure. In his prefatory note he says:

"The following two chapters were originally written in answer to the chief objections urged against acupressure by various surgical authorities. They are reprinted in the present form merely in self-defence against the reiteration of some of these objections. I have retained the enumeration of the chapters and cases, the references to pages, etc., as they exist in my volume on acupressure; and have only altered a few of the paragraphs, and added two or three footnotes, to fulfil better the objects of this reprint."

This, we believe, is the objectionable pamphlet which led to the undignified conduct of Professor Syme in his class-room on a recent occasion. It is to be regretted that a man of such acknowledged surgical skill as is Mr. Syme, and who occupies such a prominent and eminent position in his profession at the Scottish capital, should have so far forgotten what was due to himself as a gentleman.

Mr. Syme is certainly handled without gloves, and may probably, with justice, have felt somewhat irritated at being compared to the ancient surgeon Gourmelen, who so factiously opposed the introduction of the then novel method of ligation by Paré, to the exclusion of hot irons and cauteries. This pamphlet is an extract from Dr. Simpson's work on

acupressure, and contains abundant evidence of the success of his method of securing bleeding vessels. The objections to acupressure urged by high surgical authority are answered in a clear, lucid, and masterly style, and many of the British journals bear testimony to the success of acupressure where it has been tried. It certainly appears to us to be preferable to the ligature, and we should imagine will eventually become the rule in practice, ligation the exception, to be used only in cases and positions where acupressure is inaccessible.

As some of our readers may not be aware of the method of applying acupressure, we will endeavour to illustrate. A strong steel needle is introduced from the outside of the stump (in amputation) embraces the artery, and again is passed through the skin at a short distance from its point of entrance; if necessary the two ends of the needle are bound together with wire in the same way as in operations for hare-lip. This is not always necessary; but in the larger vessels would be only a precautionary step. Several bleeding points can be secured with one needle where they are contiguous. These needles can be removed at any time, at the option of the operator, twenty-four hours being usually sufficient to ensure adhesive inflammation of the coats of the vessel, and preclude the probability of secondary hemorrhage, or they can, without detriment to the patient, be allowed to remain in for weeks, their presence being unattended with suppuration or any uneasiness. Their removal is simple, and the practice, where employed, has given general satisfaction.

To Dr. Simpson is certainly due the thanks not only of the profession but of the public for this suggestion, one of many, his brain, ever fertile in improvements, has given to the profession the results of careful thought which in this instance may and we trust will change the present statistical features of operations connected with the blood-vessels. All operative surgeons are aware of the trouble which occasionally succeeds amputation and ligation of vessels, such as sinuses, tedious union from extensive suppuration, and a host of other evils, not overlooking the constant dread of pyæmic poisoning.

Dr. Simpson claims for acupressure the following advantages over the ligature.

It does not require the vessel to be removed from its vital organic connections.

It does not produce direct mechanical injury to the vessel, bruising and lacerating the two internal coats, strangulating the external coat, which leads to destruction of the constricted part, the injury often extending higher up than the point ligated.

It does not produce death of the end of the vessel, beyond the point compressed—as is the case with the ligature,—leading to the formation of as many decomposing sloughs as there are ligatures employed.

The needle does not imbibe animal fluids as is the case with hemp or silk, which speedily decompose, occasioning much irritation to the surrounding structures.

Its presence does not occasion the formation of pus, and therefore does not retard primary union.

It is removable always at the will of the operator.

It closes both artery and vein, and a single needle may close two or more smaller arteries.

It requires only one person for its application.

It is not followed by secondary hemorrhage as a result of ulceration or sloughing, as it produces none.

It is much less likely to be followed by secondary fever, as the wound is placed in a far greater hygienic condition,—there being no septic matter presented to the fresh absorbing surface of the wound.

And lastly, "for these reasons it makes complete primary union more frequent—healing quicker—and septic or surgical fever less common."

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*On the Diagnosis and Treatment of Cancer and the Tumours analogous to it.* Illustrated by sixteen coloured plates and seventeen wood-cuts. By MAURICE HENRY COLLIS, M.B., Univ. Dublin, F.R.C.S.I., &c., &c., 8vo. pp. 317. John Churchill & Sons, New Burlington Street, London, 1864. From the Author.

To arrive at safe conclusions in the diagnosis of disease, the physician requires to be well grounded in pathology—and before seeking to know the condition of organs in a diseased state, it is requisite to possess a perfect knowledge of their minute structure in health. Physiology and pathology, then, are kindred sciences, requisite, actually essential the one to the other; and the practitioner, who is anxious to fulfil his duties with credit to himself and advantage to those placed under his charge, should possess an intimate acquaintance with these sciences. The microscope has opened a new sphere to the observer; and diseases which were formerly described under a common head, are now recognised as possessing many distinctive features. Nevertheless, the microscope is apt to lead into error, as minute differences observed in objects, submitted to investigation, of apparent similarity in appearance to the unaided eye, may result in a mystification of the observer, or the setting forth of

new theories which are not practically beneficial. There is no question, however, of the advance made in clinical study aided by microscopical investigation. Much that a few years ago was obscure and unintelligible has been cleared up; and results can now be predicted with certainty, which before could only have been asserted at the hazard of the practitioner's reputation. Clinical study is the chief source of instruction; the microscope a most efficient and necessary aid. The author has enjoyed rare advantages in being attached to an institution like the Meath Hospital, and is likely to worthily fill the place once held by such great names as Crampton and Graves, whose connection with that institution created a new era in clinical observation.

The work before us consists of eighteen chapters on cancer and the tumours analogous to it. The author in his preface does not claim for it perfection. Much is necessarily omitted; other facts have been left out through circumstances beyond his control, but which we trust he will be spared to record in a further edition.

The first chapter is on the various forms of cell growth.

"The cancer-cell, first insisted on as a special element of cancer by Lébert, and by him considered as a cell *sui generis*, is now to be regarded as a modified lymph-cell. Monstrously altered in size, it would be difficult to recognise its origin were it not that in other infiltrating growths we find cells as a medium type between it and the cell of healthy tissue. Thus in the simple fibroid tumour, the constituent cells are but little removed in size and shape from the healthy type; their peculiarity takes the direction of an arrested development. Again, in the fibrinous tumour we find cells of a similar character, with an imperfect tendency to development; in the fibrous tumour the cells acquire a complete development into fibres; in those forms of tumour known as fibro-plastic, which, in fact, are fibrous or fibroid tumours, with a tendency to destructive action like cancer, but less intense, the cells are larger and caudate, stopping short of cancer as to size, and of fibre-cell proper as to development. Then again, in acute cancer, the cells are small compared with those of scirrhous or chronic cancer; while in the latter there is, as a rule, more attempt at caudate development. Now, though the extremes of this chain may be very unlike, yet the resemblance can be traced up from one link to another, and the points of difference can be satisfactorily associated with differences in the rate and power of development. These, again, have a practical connection with the clinical features of each case; and, combined with a proper study of the latter, lead to an accuracy and certainty of practice formerly not attainable without a life-long and empirically-founded experience. As a general expression of these facts, I have

ventured to enunciate a formula which seems to satisfy the requirements of our present knowledge of the subject. It is, that the nearer the constituent cells of a tumour approach to the healthy lymph-cell in form and power of development, the more clinically benign is the tumour; the farther they are removed in these two particulars from the healthy type, the more destructive or malignant is the growth. To this I would add the further observation, that tumours of rapid growth, and with a tendency to recur, have round or oval cells, which are rapidly reproduced, and have small powers of development in the direction of fibres, while the more chronic tumours, as a rule, are composed of cells which have more or less tendency to form fibre. By a combined use of these formulæ or laws, a correct conclusion may generally be deduced as to the rate of growth of any given tumour, and its tendency to return, even when its clinical history and features are unknown to us. It is not, however, expedient to get the habit of examining tumours microscopically, without as accurate an acquaintance as possible with their clinical aspect."

The author differs with Virchow and Beale as to the true meaning of the multiple nucleus of the pus cell. He says:

"Pus affords another example of the low vitality of the lymph-cell. Pus-cells are only lymph-cells which have perished, and which in parting with most of their nitrogenous elements exhibit a superabundance of oily granules in their interior. This is the true reading of the multiple nucleus of the pus-cell; it is not, as Virchow and Lionel Beale would have it, a spontaneous and vital division of the nucleus preparatory to a multiplication of the cell by division; it is only a step towards the disintegration of the cell, and an evidence of the loss of its life in its very centre and most vital part."

In the chapter on the clinical aspect of tumours, Mr. Collis refers to and reproduces at length the tabular view of cancer or carcinoma given by Walsh now quite out of date as an authority on the structure of cancer. He differs from Mr Paget in his arrangement or classification of tumours into "Benign and Malignant." On this point he says:

"To the general arrangement into malignant and benign or innocent there is one great objection, namely, that many tumours are malignant or destructive to life, if allowed to run on to a natural conclusion, which would be undoubtedly benign if duly and timely treated. Mr. Paget cuts this difficulty short by making the terms malignant and cancerous identical; but the public and the profession do not accept this exclusively, and confusion is the result. It is, I think, much better to use these terms in their natural sense, as implying clinical features. If a tumour is destructive to life or tissue, it is malignant; if not, it is innocent or

benign. Many cancers are not malignant; many non-cancerous growths are eminently destructive to life. On another point I think that Mr. Paget's classification or nomenclature is bad, namely, on the subject of epithelial disease. I do not believe its analogies to cancer, to be so marked as to justify us in calling it cancer. It possesses marked differences in its mode of origin, in its progress, and in its destructive qualities. It more nearly resembles pure and simple hypertrophies in its early stages; while in its destructive properties, more especially in its secondary developments, it bears no greater resemblance to cancer than many tumours classed by Mr. Paget as innocent. No doubt in its last stage it is an infiltrating growth, as cancer is; but so are all the recurrent tumours—so are fibro-plastic growths. All secondary tumours have a strong, family likeness, and it would be often (but not always) impossible to say what primary growth gave rise to a given secondary. However, I prefer the name epithelioma, as free from objection; it leaves the question an open one of the cancerous or non-cancerous nature of the disease."

We give *in extenso* the classification of our author, as it appears to us to possess many advantages over those of other writers.

"A. Tumours which are mainly composed of cells of various forms and powers of development.

1. Cancer or carcinoma;—*a*. Acute or encephaloid cancer; *Variety*—Fungus hæmatodes; *b*. Chronic or scirrhous cancer; *Varieties*—Atrophic scirrhus; Lardaceous scirrhus.

Cancroid.—2. Fibro-plastic tumours; *Variety*—Myeloid tumours;

3. Fibroid or recurrent tumours; *Varieties*—Fibrinous or hemorrhagic tumours; Colloid tumours.

4. Fibrous tumours; *Varieties*—Fibro-cellular tumours; Some polypi; Erectile tumours; Neuromata.

5. Epithelioma.

B. Tumours in which the cellular element is not the one of primary importance.

1. Cystic tumours; *Varieties*—Serous cysts; *a*. Simple; Proliferous; Sebaceous cysts.

Accidental condition common to many of the foregoing.

Melanosis.

*a* Cancerous; *b* Fibrinous; *c* Cystic.

2. Fatty tumours.

3. Enchondromata.

4. Bony tumours.

The remainder of the work consists of a description of each variety

following the above table, and contains throughout valuable practical hints. The author is evidently a most careful observer, and has seized every opportunity with avidity to improve his knowledge of this obscure department of our science. To such minds the science of medicine is indebted for the rapid advances made during the past few years. We have endeavoured to give our readers a slight sketch of this truly valuable addition to our literature; and we feel certain that in a future edition Mr. Collis will give to the profession the continued results of his observations, in the same spirit of truthfulness, and simple minded honesty, of which each line of this work bears evidence. The book is got out in John Churchill's best style, the colored lithographs are most beautifully executed, and the wood-cuts are worthy of commendation for their accuracy and finish. The illustrations were done in Dublin under the immediate supervision of the author.

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*The Dublin Quarterly Journal of Medical Science* for February, 1865. Dublin: Fannin & Co.

This valuable quarterly reached us just as our last number went to press. It is, as is its wont, filled with matter of great interest to the profession. The first article is on excision of the knee-joint, by John K. Barton, M.D., F.R.C.S.I., lecturer on surgery at the Ludwich School of Medicine, Dublin, illustrated by a case in which the operation was successfully performed. Dr. Barton, while advocating the operation in special cases, seems to consider its general adoption, as recommended by Ferguson and others, as a thing not to be desired; and states that its thoroughgoing partisans do more to hinder the progress of the operation, than those who condemn it altogether. With regard to the success of the various cases recorded, he says: "Heyfelder gives the result in 183. Of these, 73, or about 38 per cent., were acknowledged failures, either from death or subsequent amputation. Mr. Butcher gives a statistical report of 82 cases, amongst which 26 per cent. were failures; and Mr. Humphreys, of Cambridge, out of 13 cases, has 5 failures, or 35 per cent. Mr. Jones, of Jersey, reports 14 cases, all successful but one. Taken altogether, these figures show a very high rate of non-success (34 per cent. of the whole number); and although a great number of successful cases have been reported since then, yet it seems probable that if *all* cases which have been operated upon were recorded, we would not have if at all a more favourable record." We cannot agree with Dr. Barton in the deductions he draws in the extract we have quoted. The more

favourable *per centage*, which is now given to the operation, he infers—in fact all but actually states—is due to the non-recording of all the fatal and unsuccessful cases of late. What right has he to assume that the profession are less honest now than they were a few years ago? Is it not rather due to the practical experience which surgeons have received from witnessing and reading of the failure of others,—thus tending to induce greater caution in the selection of the class of patients upon which to perform the operation, and a greater skill in its performance and subsequent treatment? But even admitting that the result of the operations upon the knee-joint still show as high a mortality as in amputation of the thigh, is that a valid reason why we should accept that of amputation in preference to excision. Can any artificial leg at all compare with that of the natural one—with a stiff joint and two inches or so shorter. Dr. Barton believes, that before the question of excision can be entertained at all, all hope of a firm anchylosis—the result of perfect rest—must be passed. With regard to the age of the patient, he would prefer amputation to excision, if the patient had reached forty years, because a great amount of reparative power is necessary to render the limb perfectly firm. Perhaps in some instances this opinion may be correct to act upon; yet we feel certain that there are many persons suffering from diseased knee-joints—over forty years of age—upon whom it would be decidedly wrong to perform amputation—all things being equal—in preference to excision. Dr. Barton condemns the operation in young persons, unless their growth is very near complete, on the ground that the epiphysal line being destroyed, the growth of the bone ceases, and shortening to extent of five, and even nine, inches, ensues. On this head let us see what Mr. Ferguson—certainly no mean authority—says, and with his remarks we most cordially agree.

"Inequality in the length of the upper extremities is of little moment, but it is awkward, to say the least of it, in the lower, as we frequently observe after fractures and after disease of the hip or knee in early life. Such inequality may, in some instances, be attributed to bad treatment, but it often occurs despite the best skill in surgery. Yet who would in such a result say that the patient would have been better with the limb away by amputation? Who does not think that when a person gets well of a diseased knee or hip, with shortening even to the extent of five or nine inches,—no uncommon result,—he is yet somewhat fortunate,—fortunate in not having had amputation performed on his thigh? We do see occasionally cases of great distortion of the lower limb after disease of the knee, but even these patients sometimes congratulate themselves on

having the leg and foot. In some few such cases amputation in the thigh has actually been performed years after the so-called cure. Yet in such cases it is not our custom to lay blame on the treatment which may have been adopted, although I believe that it has often been highly defective. Whatever the amount of distortion after the cessation of disease in the knee-joint, I hold that excepting very special cases, amputation is unjustifiable, as resection of the distorted knee is both safer and better. But I shall not press this point at present; let me rather again draw attention to the fact, that we never cry out against either nature or the surgeon in cases of shortening and distortion of limbs after disease. Yet such defects are common. Whilst meditating these remarks, I have rarely known a day that I have not observed persons walking in the streets with shortened and distorted limbs after disease of the knee. Most of them have moved more nimbly, and with greater apparent security and comfort than if on the artificial limb after amputation of the thigh. Yet shortening has in a manner become the bugbear of excision of the knee. I admit that it is a defect, but abstraction or excision and arrest of development are evils elsewhere as well as here. Again, I admit that in this locality disparity of size, particularly in length, is an awkward circumstance. Let us see, however, in what this consists. A difference of three, five, or nine inches! What is the contrast which has been drawn with this defective limb? It is with its neighbour! And here I imagine we hit upon the weakest of all the objections hitherto made to excision of the knee. The risk of loss of life, distortion, uselessness of that which is preserved, are all serious objections or blemishes to this proceeding. A short leg to a long one is, I again admit, a defect; but in this respect surgery no more fails than nature does after disease. What, I ask, is the alternative for excision of the knee proposed by those who object to this operation? Is it amputation in the thigh? I cannot allow that which might be an easy answer to the question,—Why perform an operation at all? Why not cure the disease, and thereby avoid amputation? That is a question of a totally different kind. I am not now discussing the question of amputation, or continued, and possibly other treatment to save the limb. It is the question between excision and amputation as regards the future condition of the limb. In ordinary amputation under such circumstances, half the thigh, or possibly two-thirds, may be left. The body is mutilated to nearly the entire extent of one extremity. Say what you may as to the quality of the stump, there is left a shortened femur, a shrivelled thigh; emphatically a stump. Even Samuel Johnson's explanation of the term gives an exalted idea of the noun substantive which scarcely holds good with us: 'The part of any solid body remain-

ing after the rest is taken away,' is a flattering description of one of our stumps of the thigh. It is in reality with us barely more than a peg whereon to hang an artificial limb. In youth, in middle age, in advanced years, it never improves. It never can be more than a shortened bone, with shortened and shrivelled materials around; and this even with the perfection of a stump. The defective results of excision I am disposed, in accordance with what I have said before, to class with defective stumps. In justice to the subject I now deal with, I take a fairly perfect result of excision. Whatever the shortness, that may readily be made up by a high-soled boot or shoe. There are left the lower end of the thigh, nearly the whole of the leg, the ankle and foot; the former two slightly damaged, the latter unscathed. The foot, leg, and thigh do as much as in the cases of distortion or shortening after disease; and who under such circumstances, would compare an artificial substitute to the limb of life? A well-healed stump never in reality improves, unless, possibly, it gets somewhat more callous, whilst often it gets more tender and irritable; but the seeming perfect result of excision at the end of six or twelve months (just when stumps are generally at the best) is no criterion of true perfection. If the limb is properly managed afterwards, it goes on improving for months—aye, for years."

With regard to constitution, Dr. Barton strongly asserts the operation should never be performed upon a scrofulous patient, but believes that amputation may, owing to the amount of adhesive inflammation, set up in the latter being comparatively small. Dr. B. says: "Should the patient present the symptoms of constitutional syphilis, I think we ought first to treat him for this disease. * * * The existence of scurvy or purpura would altogether forbid the operation until these symptoms were entirely removed. * * * Turning now to the local conditions which indicate or contra-indicate excision of the knee, it is evident that any disease of the joint which has produced suppuration, is just to the extent to which it has gone—unfavourable to excision. * * When we have evidence of the ends of the bone being extensively diseased, I believe amputation the only operation advisable; first, because excision would most likely fail to produce a sound or useful limb; secondly, if solid union was obtained between the bones, the amount of shortening would be so great, that the limb would be of little use—being five or six inches shorter than the other—by no means compensating for the six months' additional time spent in recovery."

So far as the additional time passed in recovery is concerned, we think the patient would willingly submit to save his limb. Again, in amputation we must consider that though in many cases the patient may be

able to be dismissed from the hospital in about six weeks, there are cases where sinuses and irritable ulcers keep up a source of constant irritation upon the constitution, needing perhaps, it may be the removal of a portion of necrosed bone, or even a re-amputation for an ill condition stump. Dr. Barton thus closes his remarks: "The cases suitable for operation of excision of the knee are rare. They require, first, youth or vigorous age; second, no constitutional disease or sign of deteriorated blood; third, the disease of the joint to be non-suppurating and confined, or nearly so, to the articular surfaces. * * * In the few cases in which the operation is called for, the operation well merits the encomiums bestowed upon it." Then follows Dr. Barton's case—it is well recorded, and calls for no special remarks. It was a case of pure ulceration of the cartilages, and the patient a young girl of about seventeen years of age. She did well, eight months after the operation being able to walk well without either stick or crutch. The paper is ably written, and contains many good remarks; but we consider its author's views too limited as to the kind of cases in which excision of the knee should be performed.

The second article is "Remarks on Scarlatina," by Dr. Cummins of Cork, and is a very able treatise. We will endeavour to give an idea of what he intends to convey. Cork, in 1861-2, was subjected to a very severe epidemic of scarlatina,—and had been for several years previously,—each epidemic being more and more severe, although often in the same family cases both mild and severe occurred. He states his inability to arrange the cases that came under his care in 1861–2 under the ordinary divisions of simplex, anginosa, and maligna, and gives the following division: 1, epidemic sore throat; 2, typical scarlatina fever; 3, typhoid scarlatina; 4, congestive scarlatina; 5, malignant scarlatina. The first, or epidemic sore throat, is sometimes the pioneer of an epidemic of scarlatina,—sometimes treads on its receding footsteps,—but is most frequently seen in adults who are exposed to the contagion. It is generally characterised by inflammation and ulceration, with patchy deposits on one or both tonsils; sometimes by vivid redness of the soft and hard palate and pharynx. The mouth is hot, moistened with viscid saliva, and the tongue of a light grey colour. A variable amount of fever is present. The disease runs a short course, and requires little treatment beyond rest, saline aperients, and emollient gargles. He also strongly urges the inhalation of the steam of hot water; and from a considerable use of the latter in ordinary and severe cases of tonsilitis and aphonia, we can strongly recommend its employment. The second, or typical scarlatina, represents what he believes to be the ordinary phenomena of the disease,

when an average dose of the poison is received by a healthy person. It commences with nausea, vomiting, and the usual febrile symptoms. The eruption appears on the first or second day, in the shape of bright scarlet spots, about the size of a pin's head, appearing simultaneously all over the body. About the fourth day the eruption becomes more raised, giving to the finger a sensation of roughness, and on the fifth or sixth day it begins to decline. The tongue "strawberry," and the throat irregularly covered with thin white patches of exudation or superficially ulcerated. The convalescence in this form is very rapid, but great caution must be exercised. The vomiting is a constant and early symptom, and is all but pathognomonic of the invasion of the disease. The typhoid form commences in much the same manner as the previous one, but is early marked by prostration, great heat of skin, and an exceedingly rapid pulse—one impulse, as it were, flowing into each other,—early delirium, twitchings of the voluntary muscles, and rapid respiration, with a characteristic sigh or moan. These gradually increase, and are not relieved by the appearance of the eruption, which is dark, confluent, and irregular in its distribution. Partial or total suppression of urine often occurs, and is a dangerous complication. The tongue, though dry, is not rough and tremulous, but appears shining and tense, as if the epithelium had been scraped off, and a coat of varnish applied. Its surface is sometimes cracked. The throat symptoms are not urgent; if examined, it has a dusky appearance, with enlarged tonsils and uvula. The symptoms commence to decline about the tenth or twelfth day, when the disease often lapses into a condition similar to rheumatic fever, without its diaphoresis. Sometimes the heart is seized upon, and the patient's life placed in danger. Many sudden deaths from this complication occurred in Cork in 1861–2; and one such case occurred in our own practice here about a year ago. It was a young girl about nine years of age. She complained of pain, not so much referable to the heart, as to the sub-clavicular region. On examining the cardiac region a distinct friction sound was heard. She died suddenly within forty-eight hours. This occurrence of pericarditis in scarlatina is not new. Dr. West, in his work on diseases of children, makes mention of it. The next form is the congestive, and of this variety Dr. Cummins gives several cases, from which we gather the following as the principal diagnostic symptoms. In children the disease is often ushered in, by convulsions, often by stupor, followed by convulsions—many of them terminating in death previous to the appearance of the eruption. In older patients there is great stupor without convulsions, much tendency to sleep, with a tendency for the rash to come and go,

feeble pulse, vomiting and constant purging, the secretions from the bowels being dark green; when reaction takes place, it is usually excessive. In this form of the disease, the poison, instead of being directed to the skin and throat, seems to turn inwards towards the brain, lungs, and other organs. The poisoned blood, exercising a depressing effect upon the nervous centres, and through them on the entire capillary system, permitting the blood to accumulate in the small vessels of every part, thus implicating nutrition, secretion, excretion, and all the vital processes dependant upon active capillary circulation. The last division our author gives is malignant scarlatina. Here the throat symptoms are by far the most prominent and urgent. He thus describes the symptoms, and we consider them so important that we give them entire:—"The throat, which had been early complained of, becomes rapidly of a dusky hue, then covered with a yellowish white exudation, and deep irregular ulcerations appear on the tonsils. Sometimes apparent convalescence occurs about the sixth day, but with a renewal of the fever, the throat symptoms become intensified, and a quantity of viscid phlegm is secreted, which soon changes into acrid, semi-purulent matter, which runs from the nose, and gurgles into the throat with each inspiration; the breath is very fœtid, and sometimes of a gangrenous odour; at times ash gray sloughs form on the tonsils, soft palate, uvula, and pharynx, or a membranous exudation, similar to that of diphtheria, covers these parts. In a short time the infra-maxillary glands rapidly enlarge, and these, by impeding respiration and pressing upon the vessels of the neck, are generally the cause of death. * * * They sometimes soften, and are formed into large abscesses. * * * As the throat affection progresses, the patient becomes more feeble, the rash disappears, the face assumes a deadly, earthy pallor, the teeth become covered with sordes, respiration is hurried and anxious, the power of speech is quite lost, although swallowing may be wonderfully free; patches of inflammation sometimes appear on the skin, and rapidly become gangrenous. I have seen a large portion of the anterior surface of the chest slough away."

We feel sure that our city readers will at once recognize in the above brief description the symptoms attending upon many of the fatal cases of scarlatina which occurred in Montreal, during an epidemic of that disease a year ago. We remember a case of our own, in which Dr. Hingston of this city, was called in consultation, when the sub-maxillary glands having suppurated, (the rash having disappeared, and the malignant symptoms subsiding), where the incision made to relieve the matter and prevent burrowing, was attacked by erysipelatous inflammation, extending from ear to ear, followed by gangrene and sloughing of the entire parts, leaving

the unfortunate little patient almost unable to sustain her head in an upright position. It extended to the muscles of the neck, and in spite of all treatment, was extending down the anterior surface of the chest, when death relieved her sufferings. The description of this form of the disease, though brief, is, we believe, superior to that in the majority of text books. The fatality of scarlet fever, within two or three years, has attracted attention to it, and various remedies have been recommended; but we are not aware that any have as yet achieved more than the usual amount of success. Dr. Cummins has, of course, his remedy to suggest, and claims for it, if not all the success he hoped for, yet sufficient to lead him to believe that a valuable agent in the treatment of scarlatina has been discovered. His attention appears to have been drawn to this remedy from the experiments of Prof. Polli of Milan, who has repeatedly arrested in the living organism the catalytic action of putrefying organic matter, injected into the circulation by injecting at the same time one of those substances which are known to arrest the ordinary fermenting process, such as the bi-sulphite of soda, magnesia, or lime. Dr. Cummins determined to try the effect of it on the first zymotic case which came under his care; but before he had an opportunity, Dr. De Ricci published a paper detailing several cases of catalytic disease which had been successfully treated by the bi-sulphite of soda; and Dr. Mayne, who saw one of the cases, mentioned his determination to try it in scarlatina. Accordingly, when the epidemic broke out in Cork in 1861–2, Dr. Cummins gave the remedy a fair trial, and thus states his conviction of its great use: "I place it first in the list, not only because in theory it ought to be the most valuable, but because in practice I have found it so." The dose prescribed was ten grains, in a little water, every one, two, or three hours, according to the severity of the cases. It does not cut short the disease—for the fermenting process in the blood is doubtless complete before the symptoms really shew themselves,—but it tends to prevent secondary inoculation of the blood, by means of the sulphurous acid set free when the bi-sulphite of soda is decomposed by the acid of the stomach. The results of the bi-sulphite theory are given by Dr. C. in the following table:

Taking the medicine late in the disease, by cases at the point of death (in one only for a few hours), 2; died, 2.

| Without the medicine. | | | Taking the medicine early prescribed in the attack. | | |
|---|---|---|---|---|---|
| Families. | Attacked. | Died. | Families. | Attacked. | Died. |
| 4. | 13. | 3. | 14. | 15. | 0. |
| Besides one death indirectly caused by scarlatina, a month after attack. | | | One death occurred indirectly from scarlatina a month after attack. | | |

Under the medicine as a prophylactic by persons exposed to contagion in their own houses.

| | Individuals. | Attacked. |
|---|---|---|
| | 37. | 6. |

| Result | Cut Short. | Modified. | Escaped Entirely. |
|---|---|---|---|
| | 3. | 3. | 31. |

No Death.

Dr. Cummins has also this year prescribed it as a prophylactic in families exposed to the contagion of typhus fever, and so far with success. He also speaks favourably of chlorate of potash, given in doses of from five to fifteen grains, and then reviews at length the more general treatment of the different varieties. We have not room to follow him, but will merely add that his observations prove him to be a thorough practical physician. His remarks noticed above, regarding the sulphite of soda, should cause it to have a fair trial.

The remaining articles and reviews in the quarterly are all important and interesting, and we regret that our space prevents their being noticed at length. Those who may wish to subscribe for it may order it through Dawson Brothers.

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*Diphtheria, its Nature and Treatment, with an Account of its History and Prevalence in Various Countries.* By DANIEL D. SLADE, M.D. Philadelphia: Blanchard & Lea. Montreal: Dawson Brothers.

A disease confessedly so fatal as is diphtheria, certainly deserves the fullest investigation at the hands of every true follower of Esculapius. Its ravages in our own country—not speaking of the mother country or the neighbouring republic—have been such as to spread amazement and horror among many of the population, until now the very word "Diphtheria" is mentioned with awe. Hence, any light which can be thrown upon this much-dreaded disease, must be welcome to us all. Dr. Slade's work consists of about one hundred and seventy pages, and was first written for the Fisk Fund Prize, Rhode Island, in 1860. To it was awarded the prize, and it was published soon after. The present volume is a second edition,—considerably revised and corrected,—all the latest views being given. We have read the volume through with considerable care, and must admit having derived a good deal of information from its perusal. The work however seems more a compilation, than the original ideas and experience of its author. Fully one-half of its pages are devoted to a history of the disease; and Dr. Slade deserves commendation

for his researches, which have evidently been very extensive. He proves unquestionably that diphtheria has existed for many centuries under various appellations of "sore throat," "malignant sore throat," &c.,—its distinguishing features being the appearance of the characteristic exudation on the fauces, as early pointed out by Bretonneau. He, however, was incorrect in denying the presence of all constitutional disturbance. With regard to the propagation of the disease, our author quotes from Dr. Ranking's lectures, showing that it is infectious to a limited degree; and that the neglect of sanitary precautions powerfully increases its liability to propagation; but that it is not infectious, like erysipelas and scarlatina, which spread in spite of all hygienic means. Its extension through a whole family is believed to be due to the same cause which led to the first case. What that cause is, it is difficult to determine. The presence of albumen in the urine is noticed, but further research is required before any diagnostic value can be attributed to it. The latter portion of the book is devoted to the treatment of the disease, Dr. Slade, regarding it (as it certainly is) an asthenic disease, recommends supporting measures, such as tonics, stimulants, and nourishing diet; and he speaks very favourably of the tinct. ferri mu., and of chlorate of potash. He also alludes to the employment of escharotics to the throat, and apparently attaches more value to a solution of the strength of forty grains of nitrate of silver to an ounce of water, than to the solid stick. He speaks encouragingly of the performance of tracheotomy when remedies have no apparent effect over the disease, but believes it should not be too long delayed. The size of the canula used should be sufficiently large to allow a large quantity of air to enter the lungs. Dr. Slade agrees with M. Trousseaud, who believes many cases, which apparently do well at first, after the operation terminate fatally, for want of due supply of air, and that particular attention should be paid to this fact. Altogether, we consider Dr. Slade's work one well worthy of the attention of the profession, and we cannot too strongly urge it upon them. Though but little that is new is given, the compilation is so complete, that the reader rises from its perusal better qualified to battle with a case of this formidable affection, should unfortunately one or more demand the exercise of his skill; and unfortunately the disease has made sad havoc in many a family in every section of the Province.

# PERISCOPIC DEPARTMENT.

## Surgery.

### CASE OF ENCHONDROMA OF THE FOREARM.

Under the care of Mr. W. Colles, one of the Surgeons of Steven's Hospital.

R. S., aged 22, was admitted into hospital on the 24th of April, 1862. The left forearm was the seat of an enormous enchondromatous tumour fully the size of an adult's head. The growth commenced about two inches below the elbow, where it sprang abruptly from the bones. It was situated on the anterior aspect and involved the radius principally, although the ulna also was engaged; it terminated below at the wrist as abruptly as it commenced above. The hand had been removed in this hospital ten years previously for enchondroma of the fingers by Mr. Colles, but at that time there was no appearance of the disease in the forearm. The lower end of the ulna protruded beyond the tumour to the extent of three quarters of an inch. In the absence of the hand the whole limb presented a very singular appearance, and resembled very much that of a person using a boxing-glove, especially as the patient generally kept it covered with chamois leather. The tumour was most globular. In one or two points it seemed softer to the touch than over the rest of the growth. Some large veins ramified over the surface, producing indentations in its substance marking out their course. Although the patient was a small man and of slight build, he was very healthy. He suffered no pain, but merely complained of the inconvenience of the weight. The affected limb was remarkably attenuated, being much shorter and thinner than the other. This afforded abundant food for speculation. Whether was the condition of the limb to be attributed to the loss of the hand at an early period of life or to the useless inactivity enjoyed by the different tissues; or did the nutritious materials which were intended for the normal textures find their way into the abnormal growth and there become assimilated, in this way causing the increment to its size? The movements of the elbow and shoulder-joints were perfect.

The forearm was amputated immediately below the elbow, a portion of the anterior flap being formed from the integument covering the tumour. The patient recovered rapidly.

When the tumour was cut into, the surface presented an appearance closely resembling a shape of boiled rice. It was composed altogether of cartilaginous material; but in some situations several small spiculæ of

bone could be detected by passing the finger lightly over the cut surface; and at a few points on the outside there was an attempt at the formation of a bony case. In one spot in the interior softening had commenced.

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# Medicine.

## CASES OF CHOREA, WITH CLINICAL REMARKS.

Chorea shows well the danger there is in thinking of a disease as one of a nosological division. Although in one sense a disease of the nervous system, its frequent association with rheumatism shows that it would be a great error to work at it as a nervous affection only. What its precise association with rheumatism may be is a question very much disputed. Some think that the rheumatic "poison," be it what it may, produces chorea by its direct effect on the nervous centres; others, as the late Dr. Kirkes, that the association is indirect—with organic disease of the valves of the heart. There is certainly very frequently a mitral murmur in chorea, but as to the interpretation of this murmur, there are various and contradictory opinions. Dr. Walshe thinks it is frequently due to irregular action of the muscular apparatus of the valves. Other physicians think that it is frequently due to organic disease of the valves themselves. According to the late Dr. Kirkes, vegetations are invariably found on the valves at *post-mortem* examinations of patients who have died of chorea. We have frequently heard Dr. Wilkes and Dr. Andrew make the same remark. But admitting that the connection is, as Dr. Kirkes believed, between valvular disease and chorea, and not directly between rheumatism and chorea, we have difficulties in explaining the manner of the connection. The association of some other diseases of the nervous system—hemiplegia, for instance—with valvular diseases is, as Dr. Kirkes first pointed out, by embolism. It is possible that a similar explanation may hold good as regards chorea. Yet chorea, even when strictly unilateral, cannot be due to plugging of any main trunk, like the middle cerebral, or there would be actual paralysis. Dr. Kirkes believed that the direct causes of the motor phenomena of chorea were partly the circulation of morbid blood in the brain, and partly the temporary obstruction of the minute capillaries by fibrinous particles. Dr. Hughlings Jackson has suggested that the cause may be obliteration of the small branches supplying convolutions near the corpus striatum. It seems certain that there are convolutions in this region which have to

do with guiding the muscles of articulation; and it may be reasonably supposed that there are others for corresponding actions of the muscles of the limbs.

The following cases of chorea, with remarks, by Dr. Russell, are valuable additions to the clinical history of chorea. It is most important to complete the clinical history of this disease, as it has a wide bearing on the pathology of the nervous system:—

The first case is of interest by showing in a typical manner the presence of two factors, both of which are frequently in combined operation in producing the disease, viz., a depressed (paretic) condition of the nervous centres and remote irritation in the shape of valvular or other disease of the heart. This union of causes was especially insisted upon by Dr. Kirkes (*Medical Times and Gazette*, June 20, 1863), as very influential in producing chorea.

In this patient the cardiac affection, which was undoubtedly in part, if not wholly, connected with the preceding rheumatic fever, was closely connected with the outbreak of the chorea. On the other hand, the occupation of the patient, the protracted exposure to muscular effort day by day in a young and growing boy, and the obvious evidence of fatigue which his history affords, conjoined with his attenuated frame, afforded ample testimony to the existence of great exhaustion of cerebral and spinal power. To such exhaustion the highly emotional character of the boy fitly answered, and probably his sudden death must be in great part attributed to the same cause. In the post-mortem examination, although the pale softening of the nervous centres—noticed by Dr. Kirkes, as observed in all the fatal cases of chorea examined by himself, and in a large number of those recorded by others—was not present; yet the emaciated condition of the brain, as shown by its separated convolutions and by the increase in the subarachnoid fluid, and also the empty state of the minute arteries of the brain and cord, fully answer to the same description of disease.

*Chorea—Recent Peri and Endo-carditis—Death by Fainting.*—J. B., aged 14, a messenger of the Electric Telegraph Company. He was sometimes occupied for twelve hours, as a day's work, and suffered much from fatigue. He would come home quite fagged. He had, besides, a poor appetite for meat. He has been very much exposed to wet and cold, not only in his occupation, but also in consequence of very defective accommodation provided for the boys at head-quarters. His father is very rheumatic, and when a boy had chorea.

The patient had his first attack of rheumatic fever, after exposure, in September last. During the fever his side was blistered, and his doctor

said that his heart was inflamed. He was confined to bed for a fortnight, and three days after he got up the chorea commenced. The movement at first affected the left side of the body; but whilst in the hospital each side of the body seemed affected to an equal degree. He was much emaciated, exceedingly emotional, but very quick and intelligent.

The choreic movements at his admission, four days after the commencement of the attack, were very severe and general, implicating the muscles of the face and eyeballs, and at times rendering articulation unintelligible. In the chest the physical signs indicated the disease in the heart discovered after death, though Dr. Russell was not then aware of its full extent.

His amendment after his admission was very rapid, and for the first week was effected without the aid of medicine, the treatment being confined to rest in bed and nutritious diet; subsequently he took zinc, and then steel and cod liver oil.

Unfortunately, he was sent too early to the Convalescent Institution, whence he returned with effusion into his chest and increase of the movements. He was confined to bed; but one evening he got up to go to the water-closet, and in returning fell forwards on his face, and was taken up dead.

*Autopsy Sixty Hours after Death.*—Considerable emaciation; general fluidity of the blood. The large veins of the piamater were full of blood; a spot of ecchymosis, about the size of a sixpenny piece, existed on the left hemisphere. A considerable quantity of sub-arachnoid fluid lay over the surface of the brain, and the sulci between the cerebral convolutions were much increased in width. The vessels at the base of the brain were perfectly healthy, their branches quite pervious. The grey matter of the convolutions, Dr. Russell thought, was rather pale. Every part of the brain was beautifully healthy in structure; the edges of the sections were sharp, and not a particle of cerebral tissue adhered to the scalpel.

The tissue of the cord was equally firm and healthy. Dr. Russell examined by the microscope the spinal cord and one corpus striatum, and says: "So far as my means of investigation extended, these organs were perfectly healthy, with one exception; that in each there was marked deficiency of blood in the minute vessels; the contrast in this particular between them and the corpus striatum of an old hemiplegic patient which I had examined the night before was most striking."

The heart presented the remains of recent pericarditis, in an universally adherent pericardium. The left ventricle was, besides, greatly dilated and hypertrophied to a corresponding degree. A thin layer of lymph lay upon the lining of the left auricle, and the mitral valve was

thickened and puckered at the edge. The pulmonary artery was perfectly free. The other organs were healthy.

A portion of the history of another case of chorea is added by way of contrast to the preceding, as it illustrates the operation of a cause which acted directly and solely upon the brain. Severe mental emotion, in the shape of fright, induced in a child constitutionally feeble, sufficed to bring on the disease almost immediately; the rheumatic and cardiac element being entirely wanting.

*Chorea from Fright—Heart Healthy.*—A. W., aged 7, a feeble child of a family apparently consumptive, but quite free from rheumatic tendency, has never suffered from rheumatism, unless some pain in his joints, which is relieved by rubbing, is to be referred to that disease. Ten months ago the child was taken to see his dead mother; he was impressed by the sight, but not mischievously. Two days after, he was locked up in a dark room by a servant girl from noon till eight in the evening. His screams at last aroused the neighbours, and he was taken out through the window. Next morning at breakfast, the boy looked ill; he shook in every limb, and was not able to hold his cup. This was the commencement of the chorea, from which he had never fairly recovered. His sleep was disturbed after the fright; he was afraid to go to bed in the dark, and screamed in his sleep. At the same time he lost his appetite, and his spirits were depressed. His memory also became impaired; "he seemed to lose his recollection of his learning," and "he gets very forgetful," and learns with difficulty. In all these particulars he has undergone a complete change.

The choreic movements have been confined to the right side. His articulation has never been affected. He is a very small made child, with dark hair and eyes, thin, and delicate. Repeated examination fails in discovering any abnormity connected with the heart, save feebleness of impulse according with the general weakness of his body.

It may, however, happen that mental influence and cardiac disease may co-exist in the same subject. Of this the following case is an example. There can, however, be no hesitation in assigning the alarm as the immediate cause of the chorea. The disease of the heart may not improbably date from the attack of scarlet fever in childhood, and doubtless co-operated with the other unfavorable influences noticed in the history to depress the power of the nervous centres.

*Chorea after Fright—Mitral Disease of the Heart.*—A. P., aged 17. Her family history and her own are quite free from rheumatic tendency, but her father was insane. She had scarlet fever when very young, but has never suffered from short breath until quite lately. She has been

much confined at a very sedentary occupation, and has lived very badly: she looks dirty and ill cared for. Six months before Dr. Russell saw her, she was on the water with a pleasure party, when the boat filled, and she was in danger of drowning.

The alarm effected an entire change in her mental condition; she became extremely nervous and timid; at times she has been hysterical and "awfully passionate." Her nights have been unquiet, she dreamt vividly, and was deeply impressed by her dreams; one night she became persuaded that her sister's child was dead, and was with difficulty persuaded of the groundlessness of her fears. She has even been quite "wild." In all these respects her character has become quite unlike what it was before the accident. Her intellectual faculties, however, have remained entire.

Her aunt cannot fix the exact date of the commencement of the chorea; she never worked after one week from the date of the fright, but it was a month before she had medical attendance: she was then declared to be suffering from St. Vitus's dance. On closer questioning, however, it was ascertained that a week after the fright she was obliged to leave off work because she could neither thread nor use her needle; she drew out the thread as fast as she put it in, or twisted it about.

The left side of the body was chiefly affected, the lips and tongue inclusive, so that articulation was impaired.

On examining her chest, a soft systolic bellows sound was heard at the apex of the heart; no bruit was present in the course of the aorta.

She perfectly recovered in seven weeks under morphia, tonics, and cod-liver oil; her sleep also became sound. It is to be particularly observed that the bellows sound underwent no change after the cessation of the chorea.—*Med. Times and Gaz.*, Jan. 28, 1865.

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## Midwifery.

### EXTRA-UTERINE PREGNANCY IN A WOMAN WHO HAD UNDERGONE CÆSAREAN SECTION.

In 1863, Dr. Hillmann of Bonn performed the Cæsarean section on Frau K., who had all the symptoms of progressive mollities ossium. In February, 1864, being in the eighth month of her pregnancy, she fell against a hard article of furniture; after which the fœtal movements were no longer felt. In the night of February 12, labour pains set in, with

discharge from the vagina. On attempting to make a digital examination, Dr. Hillmann found that, on account of the narrowness of the space between the rami of the pubic bones, he could introduce his finger no further than the vaginal entrance; the os uteri could not be reached. He thought it possible that rupture of the uterus might have occurred, with escape of the child into the abdominal cavity; but the general symptoms which should denote such an occurrence were absent, and the labour-pains continued, although feebly. The fœtal heart-sounds and movements could not be perceived. The labour-pains gradually ceased; and Dr. Hillmann waited but in vain, for their reappearance as an indication for further operative proceedings. In eight days, the external enlargement of the abdomen, especially in the ileo-cœcal region, assumed an erythematous appearance; the part was tender to the touch, and felt as if there were œdema of the subcutaneous areolar tissue. At the same time, febrile symptoms appeared; and, as the epidermis desquamated, the patient had occasional sanguineous discharges from the bowels, which required the use of strong injections of acetate of lead to arrest them. On February 27th, an abscess appeared between the umbilicus and symphysis pubis. It broke, and discharged a quantity of fœtid liquor amnii. On introducing the finger, Dr. Hillmann felt the body of the fœtus immediately behind the abdominal wall. Subsequently, the right hip of the child, denuded of its epidermis, presented at the opening, and was removed by Dr. Hillmann. Fearing that the continued pressure on the abdominal walls might lead to their laceration, he, after the bladder had been spontaneously emptied, extended the abscess-opening upwards and downwards for about six inches. The child was found entwined by the umbilical cord; it was a male, of about a month less than full term, and was dead and putrid. The placenta was found attached in a space between the abdominal wall and the anterior part of the uterus; it was removed with some difficulty, but without hemorrhage. There were no fœtal membranes attached to the placenta, and none had been discharged from the vagina; Dr. Hillmann puts it as a physiological question whether the serous membrane of the abdomen may not have discharged the duty of the membranes. The wound was closed, and dressed with infusion of chamomile. The progress of the patient was satisfactory; on March 8, she was able to leave her room for the first time, and in six weeks the catamenia appeared, and afterwards returned at regular intervals of three weeks. On examination of the abdomen in September, the cicatrices of the two incisions were seen crossing each other at a very acute angle. In that left by the first Cæsarean section, the tissue had given way, so as to produce a hernia. On making a vaginal examination in the middle

of October, and gently pressing on the hypogastric region, the anterior lip of the uterus could be felt. The patient was in as good health as could be expected in the circumstances.—*Berliner Klinische Wochenschr.*

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## CONTINUANCE OF LIFE OF THE FŒTUS AFTER THE MOTHER'S DEATH.

Professor Breslau has attempted to solve the question, how long can the fœtus live after the mother's death? by means of experiments on the lower animals. He details and tabulates twenty experiments, the great number being performed upon Guinea-pigs. The following conclusions are drawn:—1. The life of the fœtus always endures with a certain independence after the mother's death. 2. The life of the fœtus in the dead mother is very quickly in great danger, which reveals itself in strong convulsive movements. 3. "Apparent death," into which the fœtus commonly falls in the first minute after the mother's death, may be continued in the uterus in extreme cases as long as eight minutes, but mostly death occurs much earlier. 4. The fœtuses removed, "apparently dead," from the body of the dead mother, are nearer to death than to life, for they do not recover by themselves, but quickly, almost without exception, perish. 5. Only seldom, and in the most favourable case, will the young be removed alive within five minutes after the mother's death. Even in the third minute the probability of extracting a live fœtus is very small. 6. If we operate later than five minutes, we cannot extract a living fœtus; if we operate later than eight minutes after the mother's death, not even an "apparently dead" fœtus can be extracted; the young are by that time dead. 7. The mode of death of the mother seems to be without influence upon the life and death of the fœtus. Death by asphyxia is unfavourable to the fœtus; death by hemorrhage more favourable, so also death by chloroform, and by paralysis of the nerve-centres. 8. It appears to be of consequence for the persistence of life whether the fœtus be mature or immature, but the experiments could not determine this matter. With regard to the applications to the human fœtus and to practical obstetrics, Dr. Breslau submits that:—1. There is no doubt that the human fœtus, like the brute, always survives its mother when the mode of death is rapid and violent, as from bleeding, blows on the head, apoplexy, etc. 2. Daily experience shows that the power of resistance of the human fœtus is greater than that of the brute. 3. The duty of every physician is, after the ascertained death of the mother, to perform the Cæsarean section as quickly

as possible, in order to save the child's life. The Cæsarean section may however, be avoided when the previous death of the fœtus is certain, or when the fœtus may more readily be delivered by the natural passages. 4. The Cæsarean section will give no prospect of a living or of an "apparently dead" child, if not performed within the first fifteen or twenty minutes after the mother's death. 5. If the mother have died from disease, as from cholera, typhus, puerperal fever either during pregnancy or labour, scarlatina, smallpox, etc., there is no hope of saving the child's life. The same will be the case in those poisonings of the mother which effect a rapid decomposition of the blood, and which affect the child, as by hydrocyanic acid. Chloroform-death appears to be an exception, since chloroform, as such, does not pass into the fœtal circulation, of which one may be convinced by any labour completed under chloroform, narcosis. In the discussion of the memoir in the Berlin Obstetrical Society, Professor Martin observed that in none of the four cases in which he had performed Cæsarean section after the mother's death was a living child extracted. In one the operation was completed within ten minutes; in one it was done "very soon;" in the remaining two it was done within half an hour. Dr. Boehr referred to a collection of cases in *Caspar's Wochenschrift*, in which out of 147 cases only three instances of living children occurred.—*British and Foreign Medico-Chir. Review*, January, 1865.

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## COLD INJECTIONS INTO THE UTERUS.

By A. G. Roper, Esq., Croydon.

The following case of *post partum* hemorrhage testifies to the success of cold water injected into the uterus in this serious disaster. This proceeding I have adopted for some years, with the same unvarying result of the immediate check of the flooding and the permanent contraction of the uterus. I have also found cold injection either into the vagina or uterus, of much service in these troublesome hemorrhages which accompany or succeed abortions.

Case I. Mrs. M. was confined May 20th, 1863, with her first child. The labour was natural. Two hours after the birth of the child, I received a message, stating that Mrs. M. was in great pain, and was faint; but that there was no hemorrhage. Suspecting the nature of the case, I took my elastic syringe with me. My patient was faint, pallid, with cold extremities, and nearly pulseless. There was no external hemorrhage; but the uterus approached in size to the full term. I injected cold water. Many clots were expelled; the hemorrhage ceased; and the uterus remained permanently contracted.—*British Med. Jour.*

# Canada Medical Journal.

MONTREAL, MAY, 1865.

## PUBLIC HEALTH.

"To be forewarned, is to be forearmed" is a proverb in common use, and yet how seldom is it acted upon in matters regarding our public health. Sanitary measures—which should occupy the highest attention of our city authorities—are invariably allotted not a second but a fifth rate position; and our Health Committee, which should be one of the most useful as well as most important, has invariably been the most indolent and neglectful. Seldom indeed (we speak of previous committees, for we know not how the present one will act) has the chairman been able to get a quorum, and adjournment after adjournment has taken place, but with a repetition of the previous non-success. Why this apathy on a subject which is as personal and important to every member of such a committee, as it is to every member of the community? They cannot plead want of work—a short promenade into almost every quarter of our city would assuredly convince them, what ample scope there is for their benevolent labours, and how great is their responsibility if they neglect it. Year after year our large summer infantile mortality has attracted marked attention, not only among ourselves, but throughout various portions of Canada; and yet when a notice of motion was made in our City Council to appoint a committee of medical men to inquire into the cause of this large infantile mortality, we find it was thrown aside —(for a somewhat singular reason) till the effect of the completion of the system of drainage, now in progress, is seen. Why this delaying, why this trifling with the vital interests of this city? Our drainage was certainly abominable—and we admit it is being much remedied—which will be of great use, we trust, in a sanitary point: but so long as the abominable filth is allowed to collect in the yards and lanes of our crowded suburbs, as we witness it in our daily professional visits, just so long will disease and death play sad havoc with the little ones during our intense heat of July and August. It is true, we believe, that two policemen have been specially appointed to look after this matter: but what can two men do in a city of a hundred and twenty thousand

inhabitants, on such a mission? Year after year these two men have done their best, but their labours from obvious causes have produced no visible effect. What is wanted is a competent officer of health, who in a measure, aided by the chief of police, would have the police force under his control; this officer to be responsible to the Health Committee for a proper discharge of his duties. Other cities, not exceeding our own in population, have felt the great benefits which have been derived from the creation of such an office; and assuredly the indifference and apathy with which sanitary matters are viewed in our city by those competent to move in the matter, is no small argument, why the superintendence of the Health Department should be under a properly qualified, and experienced medical practitioner. Until this is done, we fear we can hardly look for any permanant diminution in our large summer mortality. We feel and daily see the need of such a city officer, and therefore strongly draw the attention of the Council to the matter. But aside from the large number of deaths which always mark our warm months, there are reasons present this year which do not always exist, which call for especial care being taken, to have not only our city but every city in Canada, in a thoroughly clean condition. For about eight months past, typhus fever has been raging in almost every town of importance in Scotland and Ireland, especially at Glasgow, Greenock, Dublin, and Cork, carrying off hundreds of victims. By the time these lines reach our readers, our spring ships will be arriving, bringing emigrants who for days before starting have been closely huddled together in portions of the sea coast cities above named, most pregnant with the disease. Would it be at all astonishing to find that on the voyage typhus fever in its worst form had broken out on board? If such should unfortunately be the case, and they be neglected to be detained at Quarantine, the landing of emigrants from such vessels in our midst, would be an act so insane, that we fail to find words to characterize it. The disease would certainly be engendered, and once started, God alone can foresee the issue. This is one reason then why we advocate a thorough cleansing of all our cities. Let us mention another. Russia is at this moment the scene of an epidemic which has been carrying death and desolation into thousands of families, almost entirely among the lower classes, and which it is said is gradually marching into lands not primarily affected, thus imitating Asiatic cholera, in its course in 1832. Its appearance is attributed by some to a want of meat diet, and the use of diseased grain, especially spurred rye; certain it is that the majority of its victims are among the poor, and therefore badly fed. We do not give the symptoms as detailed in the daily journals—for the simple reason we have not been able to put our

bone could be detected by passing the finger lightly over the cut surface; and at a few points on the outside there was an attempt at the formation of a bony case. In one spot in the interior softening had commenced.

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# Medicine.

## CASES OF CHOREA, WITH CLINICAL REMARKS.

Chorea shows well the danger there is in thinking of a disease as one of a nosological division. Although in one sense a disease of the nervous system, its frequent association with rheumatism shows that it would be a great error to work at it as a nervous affection only. What its precise association with rheumatism may be is a question very much disputed. Some think that the rheumatic "poison," be it what it may, produces chorea by its direct effect on the nervous centres; others, as the late Dr. Kirkes, that the association is indirect—with organic disease of the valves of the heart. There is certainly very frequently a mitral murmur in chorea, but as to the interpretation of this murmur, there are various and contradictory opinions. Dr. Walshe thinks it is frequently due to irregular action of the muscular apparatus of the valves. Other physicians think that it is frequently due to organic disease of the valves themselves. According to the late Dr. Kirkes, vegetations are invariably found on the valves at *post-mortem* examinations of patients who have died of chorea. We have frequently heard Dr. Wilkes and Dr. Andrew make the same remark. But admitting that the connection is, as Dr. Kirkes believed, between valvular disease and chorea, and not directly between rheumatism and chorea, we have difficulties in explaining the manner of the connection. The association of some other diseases of the nervous system—hemiplegia, for instance—with valvular diseases is, as Dr. Kirkes first pointed out, by embolism. It is possible that a similar explanation may hold good as regards chorea. Yet chorea, even when strictly unilateral, cannot be due to plugging of any main trunk, like the middle cerebral, or there would be actual paralysis. Dr. Kirkes believed that the direct causes of the motor phenomena of chorea were partly the circulation of morbid blood in the brain, and partly the temporary obstruction of the minute capillaries by fibrinous particles. Dr. Hughlings Jackson has suggested that the cause may be obliteration of the small branches supplying convolutions near the corpus striatum. It seems certain that there are convolutions in this region which have to

do with guiding the muscles of articulation; and it may be reasonably supposed that there are others for corresponding actions of the muscles of the limbs.

The following cases of chorea, with remarks, by Dr. Russell, are valuable additions to the clinical history of chorea. It is most important to complete the clinical history of this disease, as it has a wide bearing on the pathology of the nervous system:—

The first case is of interest by showing in a typical manner the presence of two factors, both of which are frequently in combined operation in producing the disease, viz., a depressed (paretic) condition of the nervous centres and remote irritation in the shape of valvular or other disease of the heart. This union of causes was especially insisted upon by Dr. Kirkes (*Medical Times and Gazette*, June 20, 1863), as very influential in producing chorea.

In this patient the cardiac affection, which was undoubtedly in part, if not wholly, connected with the preceding rheumatic fever, was closely connected with the outbreak of the chorea. On the other hand, the occupation of the patient, the protracted exposure to muscular effort day by day in a young and growing boy, and the obvious evidence of fatigue which his history affords, conjoined with his attenuated frame, afforded ample testimony to the existence of great exhaustion of cerebral and spinal power. To such exhaustion the highly emotional character of the boy fitly answered, and probably his sudden death must be in great part attributed to the same cause. In the post-mortem examination, although the pale softening of the nervous centres—noticed by Dr. Kirkes, as observed in all the fatal cases of chorea examined by himself, and in a large number of those recorded by others—was not present; yet the emaciated condition of the brain, as shown by its separated convolutions and by the increase in the subarachnoid fluid, and also the empty state of the minute arteries of the brain and cord, fully answer to the same description of disease.

*Chorea—Recent Peri and Endo-carditis—Death by Fainting.*—J. B., aged 14, a messenger of the Electric Telegraph Company. He was sometimes occupied for twelve hours, as a day's work, and suffered much from fatigue. He would come home quite fagged. He had, besides, a poor appetite for meat. He has been very much exposed to wet and cold, not only in his occupation, but also in consequence of very defective accommodation provided for the boys at head-quarters. His father is very rheumatic, and when a boy had chorea.

The patient had his first attack of rheumatic fever, after exposure, in September last. During the fever his side was blistered, and his doctor

large and densely populated district in which it will be placed.—*Dublin Medical Press.*

We have copied the above from the Dublin Medical Press with a view of showing the advisability of establishing amongst large and densely populated localities, charities having the double object of affording relief to women and young children; not that these diseases as a class are in any way associated, except so far as to form the subject of study under a common heading. Many diseases of the female generative system are induced during the period of parturition, and as a consequence come under the observation of the accoucheur. They are usually included in the course of lectures on obstetrics delivered at Medical schools and Colleges. Independent of other considerations it is but reasonable that Physicians—those especially who are engaged in tuition—should desire to afford their pupils every facility of studying at the bed-side disease in its various phases.

The public fully recognize the value of Hospital practice; and the Physician who has the opportunity of walking the Hospitals, and of having under his charge large numbers of the sick poor annually, is regarded with greater favour than one who does not enjoy these advantages.

The advantage to the Physician is unquestionable, and to the Public equally so, as he becomes better able to cope with disease when met in private practice, if his experience is commensurate with his years.

Is there then a necessity of establishing in Montreal an Hospital for sick children and for the relief of diseases peculiar to the female generative system? To this we would reply, unquestionably there is. Our City Hospitals are not devoted to the relief of this class; they do not admit children under the age of seven years. In view of the immense annual infant mortality of our city, we regard the establishment of a children's Hospital as a conservative measure—one which, if adopted, would have a most salutary influence on our mortuary returns. We have no hesitation in asserting that many most valuable lives would be saved were the proper management of children in infant life more thoroughly studied, and rules for the guidance of mothers disseminated among the people.

The object of combining with a children's Hospital, one for the treatment of diseases peculiar to women, is, that in very many instances the mothers of such children as would be admitted into such an institution, are suffering from some uterine affection, and thus relief can be afforded to both mother and child. If we suppose another case, that a female is admitted suffering from some affection of the generative organs, for the

benefits received, she would always gladly afford help as nurse to other inmates, whose tender years and helplessness require constant attention.

We write in all earnestness, hoping that our views may be endorsed by other more influential citizens, who are proverbially benevolent, and who require but to have the matter brought home to their hearts, when we feel certain of a ready and willing response. We write furthermore in the interest of an institution with which we have been connected for the last fifteen years, and whose usefulness we have endeavoured to augment, by the establishment of an Hospital in connection therewith having the above objects. We refer to the Montreal Dispensary. We need but a helping hand not alone of a pecuniary character; we would gladly see the management of that institution in the hands of a committee of earnest hardworking and benevolent men, and we feel certain that it would soon become one of the most noble charities in Canada.

Our fellow citizens should not regard it as in any way clashing in interest with the Montreal General Hospital. There is room for both charities, as their objects are distinct, separate, each in their way useful, and most urgently necessary.

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## McGILL UNIVERSITY.

### THE HOLMES GOLD MEDAL, MEDICAL FACULTY PRIZE.

Since the last convocation the Medical Faculty in this University determined to establish a gold medal prize to be awarded for superior excellence to a member of the graduating class only. The competitors to be selected from those men whose inaugural dissertation is deemed worthy of receiving one hundred marks, the highest number of marks given for any thesis being two hundred.

The medal is in value about fifty dollars, the dies having been prepared and medal struck in England by Mr. F. Carter, Birmingham. It is to perpetuate the memory of one of the original founders of the school, the late Dr. Holmes, a man who in his walk through life commanded the love and esteem of all who knew him, from his many excellent qualities as a scholar and Christian gentleman. On one side of the medal is seen in bold relief the head of Hippocrates, with the name in Greek characters; and on the obverse is the coat-of-arms of the College, beneath which is the following, *Facultas Medicinæ Donavit.*" This is surrounded with a wreath of laurel, outside of which are the words, "*In memoriam Andreæ F. Holmes, M.D., LL.D.*" On the rim of the medal is engraved the name of the successful candidate, with the date.

The medal is given by the Faculty to him who proves himself the best man after special examination by answering, in writing, three questions proposed by each member of the Faculty. We publish below the questions given this year, the value of each being attached. The successful candidate was Mr. Edward P. Hurd, of Eaton, C. E.

*Chemistry.*

PROFESSOR SUTHERLAND.

1. In what conditions is chlorine found in nature: to what class of elements does it belong, how is it obtained and what are its properties. Value 15 marks.

2. In what conditions is oxygen found in nature, how is it obtained, what are its properties, and its relations to animal life in respiration. Value 15 marks.

3. Describe the chemical process whereby alcohol is obtained, what are its chief properties and what products are derivable from its decomposition. Value 20 marks.

*Materia Medica.*

PROFESSOR WRIGHT.

1. State what you know of the characters of sulphate of iron under different conditions; and assuming it to be oxysulphion of iron, express its formula as such. Value 16 marks.

2. Detail the actions of ipecacuanha and of its chief constituents separately. Value 17 marks.

3. Give the doses of iodine, of the iodides of potassium, mercury, quinine, starch, arsenic, and iron, and of the officinal preparations into which they enter. Value 17 marks.

*Institutes of Medicine.*

PROFESSOR FRASER.

1. Enumerate the sources of the *Salivary Gastric* and *Intestinal secretions*, and explain the part which each performs in the process of digestion. Value 18 marks.

2. Explain excito motor, sensori motor, ideo motor, and emotional reflex actions. Value 16 marks.

3. What are the pathological causes of general anæmia and hyperæmia, sthenic and asthenic. Value 16 marks.

*Anatomy.*

PROFESSOR SCOTT.

1. To what class of articulations does the knee joint belong, and what are its ligaments? Value 10 marks.

2. Describe the diaphragm, its origin, insertion, relations and what passes through its different openings.

Value 20 marks.

3. Name the relations and branches of the internal iliac artery, with the course and distribution of the internal pudic. Value 20 marks.

*Theory and Practice of Medicine.*

PROFESSOR HOWARD.

1. Describe the several modes in which a lesion of the brain may induce paralyses; explain the nature of epileptic, reflex, and diphtheritic paralyses; and give the pathology and symptoms of tabes dorsales, and hœmiplegia from embolism. Value 20 marks.

2. State Virchou's definitions of pyrexia; the arguments in proof of it; the indications for treatment supplied by it, and the means of fulfilling these indications. Value 20 marks.

3. Mention the two chief views respecting the *nature* of tubercle, and describe the symptoms and signs of the early stage of phthisis, and the treatment appropriate to that stage. Value 10 marks.

*Midwifery.*

PROFESSOR HALL.

1. Mention the different positions which the head of the child undergoes in passing through the brim, cavity and outlet of the pelvis, and specify their causes? Value 20 marks.

2. What is uterine phlebitis and what are the secondary affections to which it gives rise, specifying the treatment of the former. Value 15 marks.

3. What injurious consequences are apt to follow the employment of antimonials in very young children, and what is the preferable medicine? Value 15 marks.

*Surgery.*

PROFESSOR CAMPBELL.

1. Describe the symptoms and diagnosis of popliteal aneurism, and the different methods of treatment. If the operation by ligature is selected, where is the best site for its application, what are the dangers during and after the operation, and how should they be met if they occur? Value 18 marks.

2. Describe the symptoms of calculus vesicæ, the method of performing the ordinary lateral operation of lithotomy, with the parts that must be divided, and the accidents that should be avoided during the operation. Value 12 marks.

*Clinical Surgery.*

PROFESSOR CRAIK.

3. State the distinctive characters respectively of malignant and non-malignant tumours of the female breast, the surgical treatment and the results. Value 20 marks.

*Clinical Medicine and Medical Jurisprudence.*

PROFESSOR MACCALLUM.

1. Mention the varieties of morbid pulmonary percussion note, in which there exists special *change of quality*—the characters of each variety, and the physical conditions indicated by it. Value 20 marks.

2. How do you distinguish blood stains from stains produced by other substances? Value 15 marks.

3. Give the points of distinction between tetanus, the result of disease and that arising from the poisonous effects of strychnia,—also the general differences in the effects of opium and prussic acid. Value 15 marks.

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## ANNUAL CONVOCATION OF McGILL UNIVERSITY.

The Annual Convocation of the McGill University was held in the William Molson Hall of the University, on Tuesday the 2nd May, for the conferring of degrees in Arts; and on Wednesday, May 3, for the conferring of degrees in Medicine and Law. Both meetings were graced by a number of ladies. Dr. George W. Campbell, M.A., M.D., Dean of the Faculty of Medicine, announced that the number of students in attendance during the past session was 177, as follows:—From Lower Canada, 90; Upper Canada, 72; Nova Scotia, 3; New Brunswick, 1; Prince Edward Island, 4; Newfoundland, 1; United States, 6. The following list of students, who passed their primary examination, consisting of Anatomy, Chemistry, Materia Medica, and the Institutes of Medicine, and Botany or Zoology, was then read:—

Jonas J. Harvey, Brockville, C. W.; James B. Hall, Montreal; Alexander Falkner, Lancaster, C. W.; Robert C. Blair, Ha Ha Bay, C. E.; George Duncan, Montreal; John R. Mackie, Melbourne, C. E.; George Ross, Montreal; Thos. D. Lang, Owen Sound, C. W.; John G. Cullen, Ottawa, C. W.; Benj. F. Burch, Fort Covington, N. Y., United States; James Hayes, Simcoe, C. W.; Julius Leavitt, Melbourne, C. E.; Edmond Longley, Waterloo, C. W.,; Charles S. Parke, Quebec; William Wakeham, Quebec;

Alexander C. Savage, Gloucester, C. W.; Edmund C. Walsh, Dunham, C. E.; Samuel Campbell, Williamstown, C. W.; Chas. H. Cooke, Mount Pleasant, C. W.; Alexander Anderson, Georgiana, C. W.. John Burgess, Belleville, C. W.; Phillip Burrows, Ottawa, C. W.; Pat. Robertson, St. Andrews, C. E.; William Gardiner, Beauharnois, C. E.; James A. Knowles, Cookstown, C. W.; James C. Irvine, Montreal; Frank Cox, Charlottetown, Prince Edward Island; Corneilus J. P. R. Phelan, St. Columbia, C. E.; Charles E. Hickey, East Williamsburg, C. W.; Thomas Gendron, Quebec; Alexander Ferguson, Williamstown, C. W.; Rufus S. Parker, Newport, Nova Scotia; William Fuller, London, C. W.; John McCurdy, Chatham, New Brunswick; John Corson, Milwaukie, United States.

The graduates in Medicine were then brought forward; and having had the oath administered to them by Professor Rev. William Wright, M.D., were severally "capped" by Principal Dawson. The following list, comprises the names of the graduates, places of residence, and the subjects of their thesis:—

| NAME. | RESIDENCE. | THESIS. |
|---|---|---|
| Robert C. Blair, | Ha! Ha! Bay | Acute Pleurisy. |
| Edward P. Hurd | Eaton, C. E | Bright's Disease. |
| Jonathan C. Jones | Maitland, C. W | Scabies. |
| Malcolm D. Meigs | Bedford, C. E | Delirium Tremens. |
| Silas J. Bower | Kemptville. C. W | Acute Pleurisy. |
| Stuart Crichton | Prescott, C. W | Typhus Fever. |
| James Robertson | Georgetown, P. Ed. Is. | Morbus Coxarius. |
| James B. Christie | Oxford, C. W | Acute Pneumonia. |
| John M. McVean | Montague, C. W | Stricture of Urethra. |
| Charles E. Graham | Ottawa, C. W | Acute Rheumatism, |
| George C. Butler | Brighton, C. W | Diabetes Mellitus. |
| Alfred Codd | Ottawa, C. W | Acute Bronchitis. |
| Hanibal W. Wood | Durham, C. E | Injuries by Cold. |
| James Fitzgerald | Trenton Falls, C. W | Acute Peritonitis. |
| James T. Halliday | Vernonville, C. W | Circulation of the blood in the adult. |
| Richard T. Langrell | Ottawa, C. W | The respiration of plants and animals. |
| Abraham C. Godfrey | Montreal, C. E | Diphtheria. |
| Walter J. McInnis | Vittoria, C. W | Diphtheria. |
| Henry L. Vircoe | Sparta, C. W | Jaundice. |
| Alfred Beaudet | Coteau du Lac | Syphillitic Orchitis. |

Napoleon Magenais.....Rigaud, C. E.....Lobular Pneumonia in the adult.
Thadric Dufort.....St. Mark, C. E.....Observations on Fractures.
George Sherk,.....Selkirk, C. W.....Carcinoma Uteri.
John E. R. Switzer....Earnestown, C. W.....Pulmonary Tubercle.
John F. Cassidy.....Goderich, C. W.....Chemistry, its applicability to medicine.
Henry C. Rugg .....Compton, C. E .....Inflammation.
John R. Mackie .....Melbourne, C. E.....Valvular Dis. of Heart.
John W. Bligh.....Quebec, C. E.....Digitalis Purpura.
John C. Anderson .....Sorel, C. E .....Rabies & Hydrophobia.
Cor. J. P. R. Phelan....St. Colombia, C. E.....Continued Fear.
Gilbert P. Girdwood....Montreal, C. E .....Testing for Arsenic.
James A. Temple.....Quebec, C. E .....Uterine Hemorrhage.
John Richardson ..... " " .....Tobacco.
Prospere Bender..... " " .....Aconitum Napellus.
George Goldstone..... " " .....——— ———

The Holmes gold medal, as announced elsewhere, was awarded to Mr. E. P. Hurd, of Eaton, C. E. The prize for the best examination in the final branches was awarded to H. L. Vircoe, Sparta, C. W.; and in the primary branches, was divided between George Ross, of Montreal, C. E., and William Gardner, Beauharnois, C. E.

The Professor's Prize in Clinical Medicine, to George C. Butler, Brighton, C. W.

The prizes in Natural History were awarded as follows:—

T. G. Roddick, Harbour Grace, Newfoundland, 1st prize in Botany; C. W. Kelly, Louisville, Kentucky, 1st prize in Botany; Edwin C. Ault, 2nd prize in Botany; D. McDiarmid, prize in Zoology; and C. E. Gahan, prize for the Best Collection of Canadian Plants.

IN PRACTICAL ANATOMY—DEMONSTRATORS' PRIZES.

*Senior Class*—For general excellence as a Practical Anatomist, for punctuality of attendance at the class. Prize awarded to William Fuller. London, C. W. Students of the second and third year's course, who deserve honourable mention as good practical anatomists—Mr. George Ross, Mr. James Hayes, and Mr. Patrick Robertson.

*Junior Class*—Prize awarded to Thomas G. Roddick, Harbour Grace, Newfoundland. Students of the first year who gave satisfaction for diligence and attention—Messrs. Quarry, Hagarty, and Reid.

Dr. Stuart Crichton then read the valedictory address on behalf of the graduating class.

Professor Sutherland addressed the graduates on behalf of the Faculty of Medicine. This address will be found among our original communications.

After the proceedings of the Law Faculty, and an address from Principal Dawson, the benediction was pronounced by Professor Cornish, and the Convocation adjourned.

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## COLLEGE OF PHYSICIANS AND SURGEONS FOR LOWER CANADA.

At a meeting of the College of Physicians and Surgeons of Lower Canada, held in May last, a Committee was appointed to draw up a report on the subject of establishing an Honour Class, or Fellows, in connection with the College. We should think it advisable for the College to seek a Royal Charter, which, under present circumstances, could be obtained with facility. The following has been handed us for publication:

The Committee appointed at the Semi-annual Meeting of the College of 10th May last, to report upon the subject of the expediency of establishing a class of Fellows in the College, and fixing the titles and qualifications thereof, beg to recommend :

1. That, with the view of encouraging men of distinguished attainments and industry, the College confer upon persons possessing certain qualifications, the title of "*Fellow* of the College of Physicians and Surgeons of Lower Canada."

2. That, *two* modes of admission to the Fellowship be recognised, to wit:—by *Examination*, and by *Election*, under the following conditions :—

3. That all persons proposing to become Fellows by *Examination*, must have been members of the College six years, and have been in the practice of their profession, in private or in public, all the time ; a fact to be certified by two Members or Licentiates of the College ; that they submit to a written examination in General Pathology, Practice of Physic, and Surgery,and present Clinical reports, with observations of three or more surgical cases, and three or more medical cases, with sufficient evidence that such reports and observations have been made by themselves ; and that they forward the Clinical reports and the necessary certificates of qualification to the Secretary of the College, seven weeks before the Regular Meeting of the College at which they intend to appear for Examination.

4. That *Fellows by Election* must be Members of the College of nine years standing ; be persons who have distinguished themselves in the

cultivation and pursuit of Medical or General Science or Literature, or as Teachers of some department of Medical Science, or as Practitioners; —must be proposed by two Members of the College, at a Regular Meeting of the College, at least six months before their election, who shall furnish satisfactory evidence of the qualifications of the candidates they propose.

5. That *Honorary Fellows*, not exceeding twelve in number, may be elected in the same manner as ordinary elected Fellows, from persons *not* members of the College who have distinguished themselves in any of the above mentioned ways, and no fee shall be required from them.

6. That, at the first Regular Meeting of Governors succeeding the Triennial Meeting of the College of Physicians and Surgeons of L. C., the Governors present shall elect by ballot, from amongst the Fellows of the College, who are at the same time Governors, *nine* persons as a "Court of Examiners for the Fellowship;" *three* of whom shall be appointed to examine in General Pathology, three in Medicine, and three in Surgery.

7. That three Members only of such Court, however, shall act as Examiners at each Semi-annual Meeting; viz: one Examiner in General Pathology, one in Medicine, and one in Surgery; and a different three at each successive meeting, unless when the absence of one or more Members of the Court renders that impraticable; under such circumstances, the President, or acting Vice-President of the College, as the case may be, shall nominate a member, or more, as may be required, of the Court of Examiners, to perform the duty of the absent Member or Members.

8. That the Examiners, for each Semi-annual Meeting after the first, shall be named by the President, at the Semi-annual Meeting immediately preceding it; and should any Examiner be unable to attend the meeting for which he has been nominated, he must forward to the Secretary, three days before the said meeting, his report upon such Clinical reports belonging to the Candidates for the Fellowship as may have been transmitted to him by the Secretary for examination.

9. That at the first Regular Meeting of Governors succeeding the Triennial Meeting of the College, the Members presents shall elect by ballot, from amongst the Governors of the College, five persons, three of whom must be *Fellows*, as a "Committee to report upon the qualifications of persans proposed as 'Elected" or as 'Honorary' Fellows;" three of whom shall form a quorum for the transaction of business. If a majority of the Committee report favourably of the Candidate, the Governors shall proceed to elect by ballot the said Candidate, who shall be declared duly elected on obtaining a majority of votes.

10. That, the examination and election of persons for the Fellowships shall form part of the business of the Regular and stated Semi-annual Meetings of the Governors, appointed to be held in May and October, of each year.

11. That the examination of Candidates for the Fellowship be conducted in the following manner :—

To each candidate presenting himself for examination, shall be given a written or printed copy of such questions as shall have been previously determined upon by the Examiners, to which questions he shall give written answers, and which answers shall be considered by the Examiners.

The Examiners may, however, at their option, interrogate any candidate on any matters connected with the questions or answers, or with the Clinical reports furnished by him. These Clinical reports shall be forwarded by the Secretary, to the persons appointed " Examiners of the Fellowship," six weeks before the Semi-Annual Meeting at which the candidate intends to appear, that time may be afforded for their careful perusal and examination.

12. The Examiners shall report, in writing, to the Board of Governors, the names of such persons as they shall have found, upon examination, to be qualified for the Fellowship.

13. Candidates whose qualifications shall be found insufficient, shall not be allowed to present themselves a second time, until after the expiration of year from their first examination.

14. The Fee, £ to be deposited with the Secretary before the examination or election.

15. That, as no Members of the College have the title of " Fellow" now, and as it appears objectionable in some respects that mere " Members " should confer a title higher than they themselves possess, the Members of the College shall at the next Triennial Meeting elect by ballot twelve Members of the College possessing the qualifications required of " Fellows by Election " in the Section on that subject, and shall immediately thereafter, through the proper officers, request His Excellency the Governor General to confer the title of " Fellow of the College of Physicians and Surgeons of Lower Canada" upon the twelve Members so elected; and from them the *first* " Court of Examiners for the Fellowship ; " consisting of not less than three nor more than nine " Fellows," shall be subsequently elected at the time and in the manner directed in the Section regulating the appointment of a " Court of Examiners for the Fellowship." All of which is respectfully submitted,

R. P. HOWARD, M.D.
HECTOR PELTIER, M.D.
P. ROBILLARD, M.D.

Montreal, Oct. 11th, 1864.

## MEDICAL NEWS.

Kenneth Reid, M.D., of McGill College, passed the primary examination of the Royal College of Surgeons of England, on the 11th of April.—Dr. Pritchard, an eminent physician of Glasgow, Scotland, has been arrested on a charge of poisoning his wife and mother-in-law. The case is undergoing investigation.—Miss Mulock, the authoress, is to be married shortly to a young man, a good many years her junior, whom she nursed most carefully after a railway accident.

Dr. Andrew B. Buchanan, the only son of the aged and talented Professor of Physiology in the University of Glasgow, Professor Andrew Buchanan, died on the 8th of April, of typhus fever, contracted in the fever ward of the Royal Infirmary, to which he was physician. He was 31 years of age. He was engaged by Professor Kolliker, the eminent Histologist, to translate and edit, with Dr. Allan Thompson, Professor of Anatomy in Glasgow University, a very elaborate and profound work on Cellular Pathology and Embryology which the learned German Professor intends publishing simultaneously in England and Germany. At the time of his death, Dr. Buchanan had just finished the translation of the work.

We find in the *British Medical Journal* an account of a discussion in Germany on the merits of a new mode for amputation of the thigh at the knee, in which the femur is sawn through the condyles, or at the epiphysis, and the patella retained in the flap, that it may unite with and upon the sawn end of the bone. It is designated as Gritte's operation. Dr. Lucke details four cases in which he operated. The first died in the second week of purulent discharges; patella ununited. In the second case, the patella became firmly united with the end of the femur, forming an excellent stump. The third and fourth cases ended fatally. He communicated another case of perfect union of the patella to the end of the femur, occurring in Rotterdam. Professor Wagner, of Koninsberg, related the result of dissection in a successful case, in which "the patella was riding upon the anterior edge of the cut surface of the femur, was thickened and bent, and united to the femur by connective tissues only."

Of twelve cases of Gritte's operation collated by Dr. Heine, only two were successful, one of which was Dr. Lucke's related above; the others died of pyæmia.

CANADA

# MEDICAL JOURNAL.

## ORIGINAL COMMUNICATIONS.

*Notes of a case of Diabetes Mellitus* admitted into the Montreal General Hospital under the care of Dr. D. C. MacCallum. Reported by G. C. Butler, M.D.

James Boroughs, æt. 40, married, a native of Ireland, was admitted into the Montreal General Hospital on the 5th of December, 1864, and placed under the care of Dr. MacCallum.

He is quite emaciated, stands about five feet nine inches, and weighs about 130 lbs., though he says he has weighed 170 lbs.; his countenance is vacant; he has a habit of imperfectly articulating his words; his hearing is a little obtuse and his memory not very reliable. He has resided in Canada since his boyhood, and, for the last ten years has followed the occupation of a sawyer. His father and mother died some years ago, the former of ship-fever and latter of liver complaint, both having previously enjoyed good health.

He always enjoyed good health until about nine years ago, he suffered from a severe attack of typhus or typhoid fever, which lasted for a long time, followed by a slow and tedious convalescence. Having completely recovered, he again enjoyed excellent health till about two and a half years ago. At this time he observed himself to be growing thin and paler; about this time also, or soon after, he noticed that he had more frequent calls to micturate, and that he passed larger quantities of urine.

This condition continued, gradually becoming more and more aggravated until the date of his admission. A few days previous to his admission he contracted a severe cold which, added to his existing debility, caused him to apply for relief.

### PRESENT CONDITION.

At this time he was found labouring under the following *symptoms:* Sallow dusky complexion, in fact almost ghastly appearance of the fea-

tures with an œdematous condition of the eyelids; body very much emaciated; skin dryer than natural; has a depressed disposition with great want of energy; has a slight cough with no expectoration; mouth and tongue quite dry, and at times experiences great thirst which causes him to drink largely; appetite good; rather inordinate, and appears to digest his food well; bowels rather costive at periods, but have not been so for a long time; micturition easy and frequent, urine increased in amount, light yellowish green colour, with a characteristic hay-like odour, and is perceptibly sweet to the taste, acid reaction; specific gravity 1040 —no deposits.

*Diagnosis.* The symptoms enumerated are sufficiently characteristic to render the diagnosis comparatively easy. The patient is undoubtedly suffering from diabetes mellitus.

*Treatment.* 1st *Diatetical* — Bran bread, half a pound per day, celery, tea night and morning, with no sugar; four eggs per day and two ounces whiskey.

2nd *Medicinal.* Ordered tr. ferri. sesquichlor. mxx et ol. morrh. ℥ ss. ter die.

PROGRESS OF CASE.

Dec. 8. Found the patient to-day in his usual state, but fearing there might be pulmonary complications present Dr. MacCallum made an examination of the chest with the following results:

*Inspection.* Considerable wasting of the thoracic parietes, and a slight twisting downwards of the right clavicle; movement of the chest slightly more marked on the left side.

*Palpation* discovers that the vocal fremitus is much more perceptible on the right side than on the left.

*Percussion.* In right supra-clavicular space the percussion note is heightened in pitch, shortened in duration, diminished in mass of tone, and offers increased resistance. In right infra-clavicular regions, almost wooden quality of sound; passing down from this the sound increases in violence, same dulness being still present. In right axillary the pitch rises and the duration decreases.

*Auscultation.* In the right infra-clavicular is heard diffused blowing almost tubular breathing; heart sounds are quite distinct, a few moist crackles are also to be heard. Bronchophony also heard here. In the right supra-clavicular space blowing respiration is well marked; on opposite side replaced by normal breathing. In upper part of right axillary region breathing natural, but at lower parts small crepitations are heard, but the crepitations are more marked at the junction of this space with

the infra axillary; still lower down it is heard but coarser in character: behind and on same side we have exaggerated breathing.

Pulse thirty per minute, full and compressible; respirations 32. He has passed during last twenty-four hours ninety ounces of urine, possessing the specific gravity of 1040.

The above examination plainly indicates that, besides diabetes, the patient is suffering from consolidation of upper part of right lung. This consolidation is either solely pneumonic or mixed with tubercle.

Ordered turpentine stupes to chest. Stop the iron, but continue cod liver oil.

*Dec.* 9. Pneumonic crepitation very distinct to-day in right axillary space; friction murmur in right mammary about half an inch below and to left of nipple; diffuse blowing is also heard here. The crepitation in axillary region is confined to inspiration, and is heard only during forced breathing. Pulse 86, full. Respiration. 26.

Amount of urine passed since last visit ninety ounces, specific gravity 1035.

*Dec.* 10. Tongue clean, slightly moist, tending to dryness. Pulse ninety, compressible, slightly hard and full; bowels regular; appetite good; cough about same; no sputa; urine, quantity 100 ounces, specific gravity 1040.

The friction-like sound heard yesterday might have been generated in large tubes and sound conveyed by the consolidated lung to the chest wall. It is probable there is infiltration of tubercle as the solidification appears to have begun at the apex.

*Dec.* 11. Tongue slightly brown and dry; pulse ninety-two, compressible; respiration thirty-three; bowels regular; appetite good; cough worse than before, no sputa. Liquid bubbling rales of medium size heard in right infra-clavicular region and upper part of mammary; crepitation still in right axillary. Passed 112 ounces urine, specific gravity 1040.

*Dec.* 12. Tongue same as yesterday: pulse ninety-six, rather full and compressible; respiration 32; cough about same, no sputa. Has passed since last visit 116 ounces of urine, specific gravity 1041.

*Dec.* 13. Pulse eighty-eight, character same as yesterday; respiration thirty-six; cough about same; in right infra-clavicular region there is a distinct blowing; respiration a little metallic with almost gurgling; also large bubbling apparent especially in deep inspiration; friction sound gone; percussion note now natural in infra-clavicular region, upper part; lower down and in mammary space an amphoric note is elicited.

Skin dry to-day; passed 185 ounces urine, specific gravity 1040.

The urine within the last few days has been subjected to all the ac-

knowledged tests for sugar, with all of which it has given a decided affirmative answer. It was also tested for albumen and resin, negative to both. The rapid change during the last few days, from dry to moist sounds would indicate that the pneumonia was tuberculous. From the percussion note elicited and the breathing heard in upper part of right lung, it is probable there is at least a small cavity.

*Dec.* 14. Amphoric note is still well marked in right mammary space; cavernous breathing is also heard here; gurgling is also heard at this point.

Tongue same as yesterday; pulse eighty; respiration thirty-two; cough much worse but no expectoration; urine passed 160 ounces, specific gravity 1042.

*Dec.* 15. Tongue not so dry; pulse eighty-four, compressible; respiration thirty-four; cough same, absence of sputa. An examination of left side was made to-day. A slight shade of dulness over the infra-clavicular region; respiration exaggerated. In the axillary region there is marked dulness, but not so much as in infra-clavicular; in axillary space this breathing is of diffused blowing character, here also there is a moist click to be heard occasionally during inspiration. Therefrom softening may have commenced in this lung also. Passed during last twenty-four hours 110 ounces urine, specific gravity 1046.

*Dec.* 16. Tongue clean and moist; appetite good; pulse eighty-six, character same as yesterday; respiration twenty-nine; cough about same; passed 100 ounces urine, specific gravity 1045. To-day commenced the test for obtaining an indication of the quantity of sugar. Found that patient to-day passed 3400 grs., nearly half a pound of sugar. The patient was to-day ordered a pill containing two minims of creosote, one to be taken each day.

*Jan.* 25. Yesterday tested for uric and hippuric acid, and also for inosite, but in each case did not find the substance looked for.

*Jan.* 31. To-day Dr. MacCallum mentioned that for some time past he had noticed that the patient had a peculiar stained appearance of the skin, which led him to suspect the existence of Addison's disease.

*Feb.* 1. To-day the patient came under the care of Dr. Craik, and was by him placed more immediately under my charge in order to make some experiments to discover the effects of different diets in increasing and diminishing the amount of urine and sugar. The results of my observations I have placed in a plan from which the whole may be seen and perhaps, upon close examination, some facts of importance may be elicited.

The rates for the following thirty-two days have been placed in a tabular form in order to combine them and at the same time show at a glance all the important changes in the case during that time.

At the close of the table in the last line will be found the averages, which give the following results:

Average daily amount of urine 105 ounces, specific gravity 1039½; after fermentation 1012½; amount of sugar per ounce of urine 27½ grains; amount of sugar eliminated each day 2857 grains. Total amount of sugar passed

| December, 1864. | Amount of urine passed in 24 hours. | Specific gravity at time voided. | Specific gravity after fermentation. | Amount of sugar per ounce. | Total amount of sugar in 24 hours. | State of Pulse, | Respirations. | Pulse respir. ratio. | State of tongue. | State of bowels. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | grs. | | | | | | |
| 16 | 100 | 1045 | 1011 | 34 | 3400 | 86 | 29 | 1:3 | clean & moist. | regular | |
| 17 | 125 | 1043 | 1012 | 31 | 3875 | 82 | 32 | 1:2⅔ | furred & dry. | " | |
| 18 | 100 | 1045 | 1015 | 30 | 3000 | 88 | 28 | 1:3¼ | clean & moist. | " | |
| 19 | 110 | 1040 | 1007 | 33 | 3630 | 90 | 31 | 1:3+ | slightly furred & moist. | " | Cough worse, skin quite moist. |
| 20 | 110 | 1040 | 1012 | 28 | 3080 | 84 | 36 | 1:2⅔ | " | " | |
| 21 | 108 | 1045 | 1013 | 32 | 3456 | 85* | 32 | 1:2⅔ | slightly dry & furred. | " | The thirst during these 3 days was about the same— |
| 22 | 90 | 1042 | 1012 | 30 | 2700 | 86 | 28 | 1:3+ | clean & moist. | rather free. | diet exactly the same—was all eaten. The patient also noticed that he did not drink more than usual. |
| 23 | 130 | 1043 | 1010 | 33 | 4290 | 88 | 30 | 1:3– | clean tend'cy to dryness. | regular | |
| 24 | 100 | 1045 | 1015 | 30 | 3000 | 98 | 32 | 1:3+ | " | " | |
| 25 | 100 | 1043 | 1011 | 32 | 3200 | 90 | 30 | 1:3 | " | " | During last few days sputa has been raised. |
| 26 | 100 | 1042 | 1015 | 27 | 2700 | 92 | 31 | 1:3 | clean & moist. | " | |
| 27 | 110 | 1041 | 1010 | 31 | 3410 | 104 | 40 | 1:2½ | " | " | Sputa more abundant, not rusty. |
| 28 | 80 | 1039 | 1015 | 24 | 1920 | 92 | 28 | 1:2⅔ | " | " | |
| 29 | 100 | 1041 | 1012 | 29 | 2900 | 92 | 31 | 1:3 | " | " | Skin rather moist. |
| 30 | 125 | 1039 | 1018 | 21 | 2625 | 96 | 31 | 1:3+ | " | " | |
| 31 | 120 | 1040 | 1013 | 27 | 3240 | 94 | 31 | 1:3 | " | " | |

* Full and compres.

| January 1st, 1865. | Amount of urine passed in 24 hours. | Specific gravity at time voided. | Specific gravity after fermentation. | Amount of sugar per ounce. | Total amount of sugar in 24 hours. | State of pulse. | Respirations. | Pulse respir. ratio. | State of Tongue. | State of Bowels. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | oz. | | | grs. | grs. | | | | | | |
| 1 | 110 | 1041 | 1016 | 25 | 2700 | 86* | 29 | 1:3 | clean & moist. | regular | |
| 2 | 100 | 1040 | 1012 | 28 | 2800 | 88 | 29 | 1:3 | " | " | |
| 3 | 100 | 1040 | 1015 | 25 | 2500 | 90 | 31 | 1:3– | " | " | |
| 4 | 100 | 1043 | 1016 | 27 | 2700 | 92 | 30 | 1:3+ | " | " | |
| 5 | 105 | 1041 | 1013 | 28 | 2940 | 94† | 30 | 1:2⅘ | furred & dry. | rather free. | |
| 9 | 105 | 1038 | 1012 | 26 | 2730 | 84 | 31 | 1:2⅘ | moist & clean. | " | During these days patient still was |
| 10 | 65 | 1031 | 1012 | 19 | 1235 | 88 | 32 | 1:2½ | " | regular | the same — thirst |
| 11 | 100 | 1038 | 1010 | 28 | 2800 | 85 | 32 | 1:2⅘ | moist. | " | was not increased |
| 12 | 105 | 1036 | 1012 | 24 | 2520 | 88‡ | 32 | 1:2½ | " | " | —he each day drank |
| 13 | 115 | 1035 | 1110 | 25 | 2875 | 90 | 33 | 1:2¾ | " | " | same quantity of |
| 14 | 110 | 1031 | 1009 | 22 | 2420 | 98 | 31 | 1:3⅕ | " | " | fluid. |
| 15 | 100 | 1036 | 1010 | 26 | 2600 | 94§ | 31 | 1:3+ | clean tend'cy to dry. | " | |
| 16 | 105 | 1037 | 1011 | 26 | 2730 | 90 | 31 | 1:3 | clean & dry. | " | |
| 17 | 75 | 1033 | 1012 | 21 | 1575 | 86 | 39 | 1:2⅖ | clean & moist. | " | |
| 18 | 115 | 1039 | 1012 | 27 | 3105 | 92 | 38 | 1:2⅘ | clean red and moist. | " | |
| 21 | 110 | 1037 | 1011 | 26 | 2860 | 92 | 33 | 1:2⅘ | " | " | |
| Avg | 105 | 1039½ | 1012½ | 27⅓ | 2857 | Total amount sugar for 36 days 220¼ oz. | | | | | |

* Full and compres. † Compres. ‡ Full and compres. § Less full but compres.

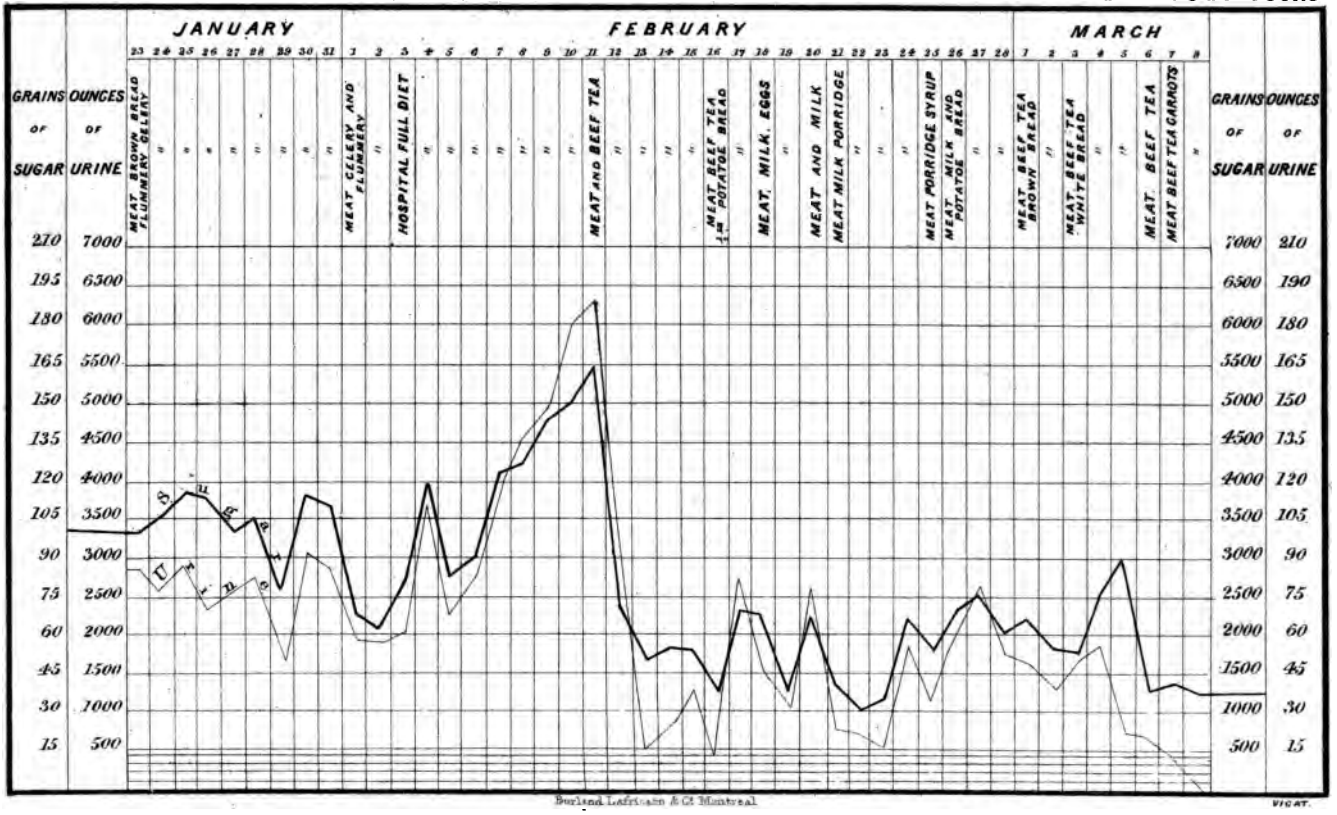
During thirty-six days 220¼ ounces, nearly fourteen pounds of sugar, were passed by the patient.

The heavy line on the plan shows the rise and fall of the sugar. The light line shows the rise and fall of the urine. The lines frequently cross, which shows that the sugar is more easily affected than the urine by the diet.

An important change will be seen to have taken place on the 11th and 12th of February, when the patient's diet was changed from hospital full to a purely animal regimen. On the 16th and 17th of same month potatoe bread was used with but a slight increase in amount of sugar, and great satisfaction to patient's appetite. Its use was more satisfactory on the 26th, 27th, 28th.

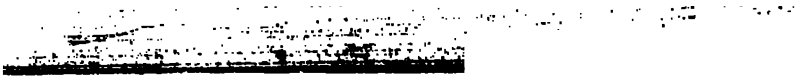
# A PLAN.

## SHEWING THE VARIATION IN THE DAILY AMOUNT OF SUGAR AND URINE PASSED UNDER DIFFERENT DIET BY J. BOROUGHS.




Burland Lafrenaye & Cie Montreal

VIGAT.



The following is the composition of this bread: Take of rasped potatoes, washed free from starch, 4lbs., mutton suet. 3oz., fresh butter, 2oz., 4 eggs, carb. soda, one drachm, muriatic acid (dilute) half an ounce. Mix into two cakes, and bake quickly till brown. (Taken from Wood's Practice.)

The almost entire absence of sugar indicated at the close of the report attributed principally to the near approach of dissolution. For many observers have noticed in similar cases that the sugar ceases to be eliminated at all for some time before death.

Although it was found in small amount then, about a week after it was not to be discovered at all, even with Tillings' test liquor. I also at this time tested it after Moore's plan and others, but none gave the first indication. The specific gravity and quantity of urine was about normal.

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*On the use of Permanganate of Potassa in the treatment of Typhus Fever and Putrid Sore Throat.* By C. B. HALL M.D., Toronto. Read before the Medical Section, Canadian Institute, May 5th, 1865.

In no branch of our progressive profession has so little advance been made as in that class of pythogenic diseases of which typhus fever stands the representative. Inflammation, or the whole class of sthenic diseases, has not the terror for us it formerly held. Diagnosis has, perhaps, done as much for this as treatment; but certain it is that in the latter there has been a wonderful advance—theoretically, men may widely differ, but practically there is no doubt the cause of inflammation can be cut short by judicious treatment. Whether we admit the theory of the protean compounds of the blood to be the seat of inflammation *per se*, it matters little. Few men will attempt the subjugation of pneumonia or any other acute inflammation without the use of some of the alkalies. But again, whether these substances classed as alkalies act directly as such, or possess, according to the language of the old alchymists, some other solvent power, I will not assume. We know that potash and soda are both classed as alkalies; but when combined with fats produce a very different compound; and so it is equally certain they bear no relative comparison in the treatment of diseases. I premise this far as an apology for bringing a new application of a now well-known remedy for checking the course of a formidable disease, without, possibly, sufficient theory to explain its *modus operandi*.

Idiopathic typhus fever is not at all common in Western Canada; but the marked symptoms, indicating a putrescent state, are frequently met with in pneumonia, typhoid and scarlet fevers. It is not so much the

crisis or critical days of the fever to which I would draw your attention, as the crisis in which the pythogenic symptoms appear: this change may be slower in some cases more than others, but never more than two or three days from the first appearance of the tongue becoming dry, red or brown, till the unmistakable sordes, with parched, cracked tongue, the brown, increasing to black, incessant thirst, increased pulse, pain in the head, dimness of vision, contracted pupils, ringing in the ears, sleeplessness, wandering of the mind, muttering, muscular tremors, and general agitation, follow in rapid succession. I have seen typhus fever change from apparent hopeful convalescence to the most alarming and hopeless state, in twenty-four hours. It is sufficient to allude to all standard authors without quoting from any, that there is a direct tendency to putresency and waste of tissue in the general cause of the disease, and that the rose-coloured spots or petechia are manifestations of its approach. However, I look upon the state of the tongue with the symptoms already enumerated as far more certain indications of the change from one stage to the other. This then is the stage of the disease in which I would venture to advise the use of the manganates, and chief of these the permanganate of potassa, and this only is the theory I advance. Indeed the only reason that induced me to try this remedy in typhus was the impression that at a certain state, varying several days, it was sure to assume the putrid type, and that if a disinfectant could be found sufficient to counteract the tendency, a sure check could be put to the disease running its course.

The chlorides of lime and soda have been the principal and most active anti-bromic compounds, in general use, though manganese as in Young's, and lead in Ledoyen's disinfecting liquids, have been used as bases; but they at best act only by driving out the fetor by a sort of *vis a tergo* force occupying the place themselves.

The salts of manganese have been long in use, as gentle alteratives, acting quite as effectually and less objectionable than mercury, and in combination with iron extolled as possessing great advantages in the treatment of anemic cases, when iron alone has failed.

Permanganate of potassa was first brought into notice in 1857 by Mr. Candy as a disinfectant, and has since been repeatedly tried in the various forms of sloughing and ill-conditioned ulcers. It has been greatly used in the United States in hospital gangrene, and in all cases sustained its high reputation as the most powerful disinfectant known to the profession. Unlike the chlorides, the salts of manganese act by the escape of oxygen, and thus completely destroying all traces of the poison or miasm or effluvium supplying the most active life-giving principle, the most power

ful restorative, and the most direct stimulant. I trust you will therefore allow me to urge the use of the permanganate upon your attention, and to entreat you to give it a full and thorough trial. I append a few cases in which the effect has been particularly marked.

*Case* 1.—E. J., male, æt. 20, Dec. 10th, 1864, fourth day of fever, —pulse 98—skin hot, dry—tongue coated white—bowels confined—no pain in head—thirst great. Urine scanty—no sediment—ordered soda pot. tart. ʒ ij every four hours. 11th, bowels moved—fæces dark, fetid—urine slightly increased—pulse 90. Prescribed vini. ipecac—liq. am. acet. 13th, complains of pain in the head—pulse 106—tongue clean, red, increased thirst—urine scanty, no deposit—pot. permanganate grs. ij every four hours—soda pot. tart. ʒ ij at night. 14th, bowels open, stool offensive,—tongue dry, cracked brown, teeth black—delirium —rose spots on abdomen inclining to purple—continue pot. perman. 15th, tongue moist, clean—urine free heavy deposit—bowels open. 16th, stopped potash—ordered infusion cinch.—convalescent.

*Case* 2.—M. J., sister of above—æt. 10. The third day—fever much the same—less violent— vini ipeca. liq. am. acet. for two days, when the tongue became dry, clean, brown—urine no deposit—take gr.½ perman. pot. every four hours—next day—tongue clean, moist, urine free, heavy deposit—in two days more discontinued all medicines—recovered.

*Case* 3*rd*. J. R., male, æt. 45, Feby. 12th, 1865—labourer; high liver—drinks spirits freely—tongue heavy coated—pulse 120 full—excessive thirst—urine scanty, dark—constantly drinking water and vomiting—8th day of attack ℞ hyd. chlorid gr. iv. pulv. ipecac—podophill aa. gr.½ every four hours. 13th, bowels open, thirst continues—pulse same—℞ ant. tart. gr. ¼ liq. am. acet. ʒ i every three hours. 14th, tongue dry—dark brown—cracked—abdomen spotted—urine no sediment—mind wandering—skin dry—pulse 120 small but firm—ordered pot. perman. gr. ij. pulv. ipecac. gr. ij. every four hours. 17th, tongue moist, clean—urine free, heavy deposit—on the eighth day convalescent.

*Cases* 4 & 5. E. B., & R. B.,—girl 13, boy 10—same house—March 12th, 1865—2nd day of attack, marked febrile symptoms—on the 4th day, 6th of attack, tongue dark—dry—sordes—pain in the head—wandering —prescribed pot. perman. gr. ½ with vini ipecac every four hours—in 48 hours both tongues clean, moist—the boy required nothing more; girl infus. cinch. four or five days.

*Case* 6*th*. P. L. male, aged 7, April 28th, 1865, strumous diathesis —scarlet fever with putrid sore throat—fauces inflamed—tongue dry—red—throat swollen, almost closed—bowels confined, pulse 130,—constantly crying—℞ hyd. chlorid. gr. ij. every three hours. 29th, bowels open

freely—no better—rash declining—to take pot. perman. gr. ½ every four hours—continued for thirty-six hours, when all violent symptoms abated. May 1st syr. ferri. iodid, and tr. cinch. co. for a few days—recovered rapidly.

Bay Street, Toronto, C.W., May 1865.

NOTE.—In publishing the above important paper we cannot but state that the permanganate of potassa was recommended by our friend and fellow townsman, Dr. G. P. Girdwood, as an excellent lotion in foul ulcers, and also in malignant sore throat, as early as the year 1857. This may be found on reference to the second volume of the London *Lancet* for that year. The permanganate of potassa had before that period been introduced as a remedy in diabetes.—EDS.

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*Exanthematous Fever at Cacouna*, By WILLIAM JAMES ANDERSON, M.D., Quebec.

On the 10th July last, I received from a friend at Cacouna, a telegram as under,—"Come down first opportunity, boy very poorly with sore throat—E.—Measles." I went, and on arrival was informed that the children were somewhat better. I may here say that G. was a boy aged 14, B. a girl aged 11, and E. a little girl aged 3. The family reside in the vicinity of Quebec, but for several years past, have been in the habit of spending a few of the summer months at Cacouna. The family then at Cacouna, consisted of the parents, eight children, governess, four females, and a boy servant. When at home they spend much of their time in the open air, and have enjoyed a full average amount of health, though they have not escaped the epidemics to which children are prone, and with the exception of the two youngest, all had passed through the ordeal of measles and scarlet fever, and during the prevalence of mumps last autumn, all had very acute attacks of that disease.

On enquiry I found that Dr. Thomas, the resident practitioner, had been in attendance, and had at first pronounced the disease measles.

I first examined G. His countenance was that of one affected with mumps; the parotid glands were very much enlarged; skin very hot and dry; tongue coated with a thick dry brown crust; lips tumid, brown and dry; puffiness about the eyes; tonsils enlarged and ulcerated; breath very offensive; great thirst; urine scanty; severe diarrhœa; erythematous swelling of the left wrist and knee, with great tenderness to touch. I was told that in the morning the right ankle and wrist had been similarly affected, but they were now quite free from swelling or pain; there was

desquamation of the buttocks; the pulse 120, and there was constant restlessness. I was informed by his mother and Dr. Thomas that the eruptions, which had been of a peculiar character, had been chiefly on the buttocks, and had produced great irritation, it presented large red blotches of rose-coloured pimples, with white tops or blisters, containing fluid.

In the case of B. the symptoms had been much milder, the glands had not been so much swollen, nor the throat so sore; the eruption milder, not scarlet but *rosy*, and in crescentic patches; it was this case particularly which had led Dr. Thomas to pronounce the disease measles.

In the case of E. the eruption had been very similar to that of B. and still presented a rosy appearance; the parotids were not so much enlarged, but there was puffiness about the eyes, and the tonsils were swollen, inflamed and ulcerated; tongue very sore, and lips ulcerated, especially at the angles of the mouth; skin hot and dry, great thirst; urine scanty and albuminous; severe diarrhœa; drowsiness during the day and great restlessness at night.

Margaret, the cook, had no eruptions, but enormous glandular enlargement, and extensive ulceration of the tonsils, and when she attempted to swallow any fluid, the greatest portion was discharged through the nostrils.

The mother also had chills and fever, with considerable enlargement and ulceration of the tonsils. In all cases the breath was most offensive.

On consultation with Dr. Thomas, I had the pleasure to concur with him on all points, as to the treatment; but from the absence of bronchitic nasal or conjunctival irritation, and from the presence of angina, and especially from my knowledge that with the exception of E. they had already the disease, I stated that I did not view the cases, either as measles or scarlet fever, but rather as types of rosalia or roseola. Dr. T. then informed me that though at first he had been inclined to consider it as rubeola *sine catarrho*, as it progressed he had begun to doubt, and on learning the facts I have mentioned, had sought to account for it in another way, and as I think, had very properly come to the conclusion that it was a disease "*sui generis*" arising from foul air from the cellar, which he had accordingly directed to be cleansed and ventilated. Dr. T. also informed me that there was not then, nor had there been to his knowledge, any exanthematous disease prevailing in the district, but that the gentleman who had occupied the house the previous summer had been constantly troubled with sore throat—On examining the cellar I found no mode of ventilation, but through a door, the smell was very

offensive, and in a part of the cellar I discovered decaying cabbage leaves, rotten potatoes, and musty straw, but there were no stagnant waters. The cleansing was proceeded with, and chloride of lime freely used, which quickly found its way through the floors to the upper chambers. We agreed that great attention should be paid to the throat and mouth, and that they should be frequently washed with a solution of chlorate of potass, that saline drafts of citrate of potass and lemonade should be freely given, and that the soap bath should be had recourse to. Owing to the acute rheumatic affection of the joints in the case of G., it was decided to give him full doses of the hydriodate of potass and citric acid every fourth hour; and I may here say, that after the administration of the second dose, the tongue became moist and began to clean, the skin had a tendency to moisture, the pulse fell, and the tenderness of the joints was perceptively diminished. I remained at Cacouna till the afternoon of the 13th, when, being satisfied that everything was going on well, I returned to Quebec. Everything did go on well for a time, and the parents came up for some days to their home; but immediately on their return to Cacouna, I received on the evening of the 27th a letter from Mrs.——, as follows:—"When we came down on Saturday we found B., W., E., and baby sick. B. has been in bed for three days, and is better. W. you would scarcely know, he is so reduced; the Dr. says E. has dropsy." B. was the eldest daughter 12 years of age; W. a fine boy aged 5; the baby was a little over 18 months; E. was the little girl already mentioned. I went down to Cacouna on the 28th, and found W. very seriously ill, but the symptoms were not so alarming as were presented in E. In B., the eldest, the eruption was slight, no swelling of the parotids, and the throat but slightly affected. I certainly never could have recognized W.; the parotid glands were enormously enlarged, the countenance extremely emaciated, like that of a very old man, and the skin hung like loose trousers on his legs. His mouth was brown and the tongue aphthous; lips ulcerated, especially at the angles of the mouth; an offensive brown sanies was discharged from the nostrils; the skin hot and dry; urine scanty; diarrhœa; great restlessness, and pulse 130.

The disease was very slight in B., the eldest, and A., the youngest girl; the eruption was slight and miliary, such as is presented in "Roseola Milians," and in other cases nothing was required but a simple purgative, and the use of the soap bath, and to prevent the indulgence in the appetite, which was very urgent. I had again the pleasure to agree with Dr. T—— as to the treatment, and remained at Cacouna, till Monday 1st August, when all the patients appearing in a fair way,

I returned to Quebec, and I several times heard that they were continuing to improve. On the 12th, Mr.—— came up to Quebec, when I learnt that all were quite well with the exception of E., in whom the dropsical symptoms had not yet disappeared, and W., who though much better, was still suffering from the enlarged gland, which, it was feared, would suppurate. I may here mention that three years before I had been called in to consult with the late Dr. Fremont in the case of W., who had then, with the rest of the family, been attacked with scarlet fever: on that occasion the parotids had been enormously enlarged and the lungs congested—one of the glands had suppurated, and an early opening had been made to discharge the matters. I now recommended that the matter should be discharged as early as possible, and I learnt that it was and continued to hear favourable accounts of his progress till the afternoon of Monday, the 22nd, when I unexpectedly heard that he had died that morning. All the members of the family and all the servants had either been attacked with the eruptive fever or with sore throat and enlargement of the glands. I believe the governess alone escaped, though exposed in every way to contagion, and almost overcome with the fatigue of watching and nursing. I saw them all with the exception of the last boy; and Dr. Campbell, of Montreal, being in Cacouna, was called in by Dr. Thomas, and he unhesitatingly pronounced this case, scarlet fever. Up to this time no other case had occurred in Cacouna, but at last a groom in the employment of Mr. Ross, of Quebec, was attacked, and Dr. Sewell the attendant of Mr. Ross's family being in Cacouna, was consulted and pronounced it a case of scarlet fever. The man was sent to the Marine Hospital, Quebec; and Dr. Roy has informed me that he viewed it as a case of scarlet fever. I have also been told by Dr. Sewell that he never doubted that it was scarlet fever.

I cannot speak of these cases, not having seen them, but I had the pleasure of calling on Dr. Campbell a few weeks ago in Montreal, and he is still positive that the boy D., whom he saw, had scarlet fever; and moreover I was informed by him that he had ascertained that during the preceding winter, an exanthematous fever, called by the *habitans* "fièvre rouge" had prevailed, and that some of the inhabitants of the house subsequently occupied by my friends, had had the disease, and that they had carefully concealed the circumstance from Dr. Thomas, who, during the winter, resides permanently at Rivière du Loup. I can have no doubt that Dr. Campbell is right in his conviction, since he believes in *second* attacks of scarlet fever many of which he asserts he has seen. Drs. Campbell and Sewell are both, like myself,

veterans in the profession, and are moreover of extensive and enlightened experience; and Dr. Roy, though a much younger man, is a very intelligent practitioner, and I will not venture to say that the cases which came under their observations, were not cases of scarlet fever, but I may be permitted, with equal confidence, to assert that none of the cases I saw were scarlet fever, even though I am prepared to admit that scarlet fever, like small-pox, may be taken a second time.

There can be no doubt that for a long time scarlet fever and measles were viewed only as varieties of the same disease, and that when their distinctive features became so apparent that they were recognized by the profession as two distinct diseases, each possessing its specific poison, still the resemblance was frequently so great that it was utterly impossible for the most experienced to designate whether the case was scarlet fever or measles. Nor can there be any doubt that since the almost suppression of small-pox, both these diseases have become more prevalent, and assumed a more severe type, and that different epidemics, have been of such a character that a family resemblance could scarcely be traced. It is also admitted that within the last thirty years, exanthematous diseases have appeared both as epidemics and sporadically, which cannot be classed either as measles or scarlatina, but which have been variously classed under the head of rosalia, roseola, or rubeola hybrida.

That the medical art is very far from an *exact* science is too clearly proved by reference to the standard authors on this very subject of exanthems. Not only is there great discrepancy in nomenclature, but even when certain terms are recognised as synonymous in reference to a particular disease, the descriptions of it as given by the different writers will be found to differ materially.

I shall refer to a few authorities. Dr. George Gregory of London, treats of measles and scarlet fever under the terms *rubeola*, the *morbilli* of Sydenham or measles and *scarlatina*, that variety of exanthema now known as Scarlet Fever, but which was first described as *Rubeola*, by the Latin Translators of Hali Abbas to distinguish it from *Morbilli*. Measles he describes as "the product of a miasm or morbid poison which in this country is invariably received by the mode of infection." "It occurs to all mankind *once* in the course of life; but having been undergone the constitution remains for *ever* after unsusceptible of the same disease." —It is "a fever with *catarrhal* implication, which, at the end of seventy-two hours, throws out an abundant eruption consisting of minute confluent papulæ slightly elevated above the surface of the skin, and subsiding in three or four days at furthest." There is, also, "an exanthemic

disorder allied in aspect to rubeola, but not exhibiting any initiatory *catarrhal* symptoms." In reference to this latter, Dr. Bulkley of New York says:—"The cases which constitute the largest share of "rubeola sine catarrho" have been those of roseola, between the cutaneous developments of which and of rubeola there is often great resemblance."

Dr. Gregory then describes scarlatina, taken in its widest sense, as a fever sometimes inflammatory, sometimes typhoid, the offspring of a morbid poison gaining access to the body, by the mode of infection only, characterised by a short period of incubation, an eruption rapidly developed, and an *inflammation of the fauces*, having a strong tendency to terminate by sloughing."

It may terminate in a week, or extend over a month. "Such a disease does not, like measles. invade a large proportion of mankind during infancy, *but having been undergone*, the *susceptibility to future attacks is exhausted.*"

Again: "No doubt exists that in a very large proportion of cases, scarlet fever is the product of a specific miasm; but the question may well arise, whether any combination of circumstances can develop an eruption possessing the characters of scarlet fever. *I am bound to tell you that I believe they can.*" Further; "This much I thought it right to say before approaching the *vexata questio* of secondary attacks of scarlet fever. Observe the conflicting statements of authors on this head. Dr. Wilan (certainly one of the most acute and careful observers of the disease) says that out of 2000 cases which he attended, he saw no instance of recurrence. Dr. Currie, of Liverpool, who devoted much attention to scarlet fever, was compelled, by the results of long experience, to "renounce the opinion he had early imbibed, and to confess that the same individual is liable to scarlatina, *once* only." Sir Gilbert Blane, on the other hand, met with one instance of scarlet fever occurring thrice, and, as he says, "without the least suspicion of ambiguity." Dr. Burns inclines to the notion of occasional recurrence. Exceptions do occur; nevertheless, the law of exhausted susceptibility, as Dr. Williams calls it, *is very strongly marked in this disease.*" But "medicine is filled to overflowing with false facts of this kind set down without much consideration, and with a scanty knowledge of pathology." Tweedie and Rayer have both met with several well-authenticated secondary attacks of scarlet fever—and during the past month I have met with a very striking case occurring in Quebec. The son of a medical friend was sent home from Lennoxville on the out-break of a scarlet fever there, on the third day after his coming home, he was attacked with scarlatina pretty severely; the eruption and angina being well marked. His little sister, somewhat

his elder, and who had had the disease during a former epidemic, was about the same time attacked with fever and angina, and a miliary eruption on the throat and chest, which only remained about forty-eight hours. Still I have seen many similar cases passed as scarlatina, and would most likely hold this to be one, had the doctor not assured me that she undoubtedly had had the disease previously. Both patients got well, and confidence was felt that the disease would extend no further, when a younger sister was attacked, and had the fever very acutely; and very much to our surprise the first little girl was again affected, the tonsils and cervical glands were enlarged and inflamed, a rosy miliary eruption again appeared, but chiefly on the trunk and lower extremities, followed by desquamation. This third attack might, under other circumstances, have been viewed as scarlatina, but the pulse never rose above ninety; while in the cases of the other two it continued above 120, till desquamation was nearly completed.

Dr. Gregory describes *roseola* in some of its forms as very trivial; but I desire to direct attention to the variety *R. exanthemica*, or *variolosa*, as bearing on the case of G., at Cacouna. "It happens," says Dr. Gregory, "that after one, two, or three days of fever, a roseolous rash is suddenly thrown out over the face, neck, arms, and back, in irregular patches. In some cases the eruption assumes the aspect of scarlet fever. On the second or third day from the appearance of this rose-coloured or scarlet rash, pimples display themselves in the very midst of these patches. These gradually advance; and in three days more, show the depressed centres of variola. The occurrence is very annoying in practice. The physician first announces that his patient has fever. Two days afterwards he changes his note, and informs the friends that the patient besides fever has the roseola or rose rash,—an affair of no consequence. Two days after that he announces to the astonished listeners, that the patient has small-pox! This once occurred to myself in consultation with Mr. Hammond at Windsor."

I have met with several cases of this type besides the case of G., and have no difficulty in identifying it (the roseola variolosa of Gregory) as the roseola punctata of Erasmus Wilson, who says: "This disease is interesting, not merely on account of its novelty, but also from the questionable shape in which it makes its appearance, and from the variety of character which it subsequently presents. Thus, a resemblance to variola at its outbreak, caused the patient to be sent to the small-pox hospital, while its aspect within the hospital suggested to gentlemen well acquainted with the physiognomy of eruptive disease, ideas of lichen lividus, urticana, erythema, rubeola, purpura, &c., &c. The name

given to it by Mr. Marson, namely, erythema rubeolosum, conveys a good notion of its erythematous and rubeoloid character; but I have not adopted that designation from the belief that the nature of the disease is better expressed by the term roseola. Roseola, I need hardly say, bears a close resemblance to erythema and rubeola; indeed, in some cases, it seems to be a compound of the two."

The characters of this affection roseola, are generally, according to Wilson, as follows: "Febrile symptoms of a sub-acute type, accompanied with redness of the eyes, slight coryza, redness of the fauces, and swelling of the mucous membrane of the mouth, ushering in an exanthema at the end of three days,—the exanthema appearing on the mucous membrane and skin; on the latter in the form of small red spots around the mouths of the follicles, then becoming diffused so as to cover the greater part of the body, reaching its height on the third day, at first of a bright raspberry-red colour, afterwards acquiring a dull roseate hue—the dulness increasing with the progress of the decline,—the entire attack lasting ten days, of which three belong to the febrile period, three to the exanthema, and four to the decline, the rash assuming a different form on different parts of the surface, such differences being all attributable to roseola."

Dr. Marshall Hall, in drawing the distinction between rubeola, measles and scarlatina, says: "In reference to the indoles of these two diseases, I would remark that rubeola principally attacks the parts of the respiratory organs *below*, whilst scarlatina is chiefly situated *above* the glottis. This important point appears to be the boundary of the internal affections, in both these affections respectively."

Dr. Hall believes in the recurrence of rubeola, but says nothing of second attacks of scarlatina.

McIntosh says, "The rash in scarlet fever appears somewhere between the first and sixth days of fever, *appearing first on the face and neck*, and progressively spreads over the body, terminating between the seventh and tenth days. The inflammation of *the throat is the prominent symptom.*" He says nothing of recurrence, but that it "occurs only *once* in a lifetime." Measles is marked by the crescentic eruptions and *bronchial* symptoms. Roseola "has often been confounded with measles and scarlet fever, and I have seen the wisest heads baffled in determining the point.

In 1838 Nova Scotia was visited with a wide-spread and very fatal epidemic of scarlatina which very often became hybrid in November, December, and January; in February, March, and April, 1839, measles followed by whooping-cough prevailed; and in August and September

following, rosalia or roseola in a very severe form attacked many of those whom I had previously attended in both scarlatina and rubeola. Roseola was in this epidemic generally attended with enlargement of the cervical glands, and extensive desquamation, *invariably* in patients of a strumous diathesis.

Copeland says, "The eruption in scarlatina appears on the second day, *on the fauces, face, and neck*, spreading subsequently over the body, terminating from the fifth to the seventh day, and *occurring only once in a lifetime.*"

Roseola, rose-rash, rosalia, rubeola spinosa, has several varieties. Roseola *autumnalis* is attended with desquamation. Roseola *cholerica* presents more the appearance of scarlet fever and measles than roseola. About the sixth or seventh day, the epidermis cracks, and is thrown off in large scales, and Rayer has seen it complicated with inflammatory affection of fauces and tonsils, sometimes terminating in death.

In scarlatina, according to Watson, the eruption begins on the face, neck, and breast, and extends to the extremities, pervading almost every part of the skin, standing out for three or four days, when it declines and disappears before the end of the seventh day. It is distinguished from measles by the *affection of the throat and skin*, only one of which may be well marked. It seldom comes on a second time.

Willan and Bateman say, it is difficult, if not impossible, to distinguish roseola from scarlatina. Dr. A. Thompson says, in scarlatina, rash attacks the *face* first; in roseola, the *extremities*. I may here remark that it is very singular that in the several cases of scarlatina which I have lately seen in Quebec, the eruption did not first make its appearance on the face and neck.

Wells and Begbie say, that the urine in scarlet fever *always* contains more or less albumen, which generally appears a few days after commencement of desquamation, lasting three or four days, and is not to be viewed as invariably a precusor of dropsy, but frequently disappears without such a sequel. I have noted this, and also albuminous urine in parotitis.

Grant's "Hooper" says, Roseola appears *first* on head and neck, and, in course of a day or two, is destributed over the whole body in patches larger and more irregular than measles. There is itching and tingling. The eruption is first red, then deep roseate; fauces tinged with the same; toughness of tonsils. The eruption wholly disappears on the fifth day, but in some cases it continues more than a week appearing and disappearing. There is desquamation in roseola autumnalis. It has sometimes been called rosalia, which name has been also applied to measles and

scarlet fever. It is most severe in scrofulous habits. Dr. Hooper has seen dropsy after measles.

Dr. Maunsell saw rubeola *sine catarrho* epidemic in Dublin during the latter part of 1839. One family of four children all underwent eruption accurately resembling measles, and they were all again attacked within a week of its disappearance, and went through measles regularly.

Dr. Drake, in his work on the the "principal diseases of the interior valley of North America," says: Roseola is often confounded with scarlet fever, especially when it is accompanied with throat affection. Scarlatina, with *catarrhal* affection superseding *anginosa*, was epidemic in Cincinnati in 1811–2–3, and did not present the decided characteristics of either scarlet fever or measles. In Jacksonville, Illinois, in 1813, mobilli prevailed as an epidemic and *angina* was the prominent feature. The angina supervened on catarrah, and the crescent-shaped spots assumed a scarlet hue. In Louisiana, in 1844, an *androgynous* or hybrid epidemic of similar character prevailed from January to June, and Dr. Ames had occasion more than once to change the name which he had entered in his book. Drake, as the opinion resulting from thirty years' experience, submits that measles and scarlet fever are merely *varieties* of one species, and may unite in the formation of a new variety, or that they may be two distinct *species*, but likely to concur in the production of an hybrid, which, therefore, would not be contagious.

Aitken adopts a new terminology; he accepts scarlatina for scarlet fever, resumes morbilli for measles, and adopts rubeola to denote hybrid of measles and scarlet fever, or rothelis; pointing out that Kutness, of Dresden, declares the "androgynous cases calculated to embarrass the most experienced diagnosticers;" and that Schönlein classes measles as a peculiar exanthematous form of catarrah, and scarlatina among the group of erysipelatous diseases." Aitken says of the prognosis of rubeola or hybrid: "It requires to be as guarded as in scarlet fever, for, like scarlet fever, rubeola is often an extremely and rapidly fatal disorder, though, in general, it is a mild disease. Copious secretions of mucus in the back of the throat, is always a bad symptom, as is regurgitation of fluids by the nose. The condition of the urine requires to be daily examined. Treatment is similar to that of scarlet fever. The accompanying febrile symptoms distinguish the disease from roseola. Dr. Aitken considers that scarlet fever may be taken a second time, but believes that death from a second attack is *unknown as a fact.*

Should this latter statement be correct, and should Dr. Campbell's opinions of the exanthem at Cacouna be correct in reference to all the cases of the family, then in the case of W. we have to record the first

authentic death from a second attack of scarlet fever. But though, as I have already said, I am free to admit that scarlatina, like small-pox, may, as the exception to the rule, be taken a second time, I think it most improbable that a whole family, and that so large a one, should be attacked a second time together. I prefer, therefore, to view all the cases of which I was a witness, as well-marked cases of roseola or rosalia, exhibiting unmistakably all the characteristics of that exanthem from its mildest to its most severe and fatal type. But, after all, "what's in a name, the rose by any other name would smell as sweet." Whether we are to view these cases at Cacouna as scarlet fever, produced by infection from fomites remaining in the house since the previous year, which we know is quite possible, or whether we may consider them as varieties of roseola, arising from the foul airs from the cellar, it is of very little consequence, as there ought to be no doubt as to treatment.

I may have been led to form the strong opinion I entertain from my having no doubt of all the family, with the exception I have mentioned, having previously had both measles and scarlet fever; but I believe, from having carefully watched all the cases, and having marked the different types which they offered, I should have been disposed to have viewed them as roseola from my distinct recollections of the characteristics of the epidemic of 1839. I may add that I think it remarkable that though the disease extended from the first week in July to the 22nd August the disease, with the single exceptions I have mentioned, did not go beyond this one family.

I shall conclude with an extract from Marshall Hall: "The science of medicine is not so simple as it has been made to appear. When our books present a faithful portraiture of nature, we shall discover that during the course and after the course of many diseases, we have still to watch the patient if we would early detect diseases which only require to be over-looked and disregarded in their beginnings, to be placed beyond the reach of remedy. The eye, the mind will speedily become familiarized with the multitude of events which occur, and then the principal difficulty will be overcome."

# PERISCOPIC DEPARTMENT.

## Surgery.

### FIBROUS POLYP IN THE NASAL CAVITY.

D. M., 11 years of age; has a fibrous polyp in the left nasal cavity, which commenced forming eight months ago. It is firmly attached by a broad base to the posterior nares, to the floor of the nostril, to the side of the ethmoid bone and to the basilar process of the occipital bone. The diseased mass completely blocks up the posterior nares, and has been the seat of repeated hemorrhages so as to produce a certain degree of anæmia. It discharges a thin muco purulent and occasionally bloody fluid. The patient is unable to articulate well on account of the obstruction, and snores most violently during the night, being obliged to lie with his mouth wide open. These tumours are composed of fibres interlacing with each other in every conceivable direction, they are remarkably vascular and rarely occur in any other situation than the posterior part of the nasal fossa in connection with the floor of the nostril or the septum of the nose or of the palate bone, or all of these parts simultaneously. It is likewise remarkable that they occur at comparatively early age. Their growth is usually rapid, and in time they acquire a large bulk sufficient to lift the nasal bones out of their position, producing the deformity called "frog face." They are susceptible of malignity and occasionally take on this kind of action. This tumour is very difficult to remove on account of its being seated so far back, and as its adhesions are so firm there is no method of detaching it, but by dividing its connections with the knife. Attempts have been made to ligate them with a double canula, but in this case the base is so broad and the attachment so firm that failure would be inevitable.

Prof. GROSS devised, many years ago, an instrument for the removal of these tumours. It is shaped like a chisel and bevelled off at the extremity. By means of this instrument the mass was shaved off from its connection with the floor and walls of the nasal fossa: the finger of the left hand being placed in the posterior nares so as to prevent the tumor from falling into the larnyx in the event of its being detached. The adhesions to the basilar process of the occipital bone were so firm that they could not be detached with a pair of lithotomy forceps, and an instrument similar to the one described, but having its point bent at an eagle, was devised to shave it off from its connections in these situations. The hemorrhage was considerable, but was restrained by plugging the anterior

and posterior nares by the aid of Bellocq's canula. These operations forbid the use of chloroform as it is necessary that the patient should have full control of his palate to prevent the flow of blood into the larnyx.—*Surgical Clinic of Prof. S. D. Gross, M. D.*

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## NOTES FROM DUBLIN.

Two cases of great interest have lately occurred here, which, I think, it will be worth your while to record. Therefore I send you brief notices of them.

The first is that of a fracture of the spine, in which the operation of trephining was performed. The patient was a man named Joseph Collins, aged 38 years, who entered Jervis Street Hospital, December 28th, 1864, suffering from an injury of the spine. Dr. Robert McDonnell, who saw him immediately after his admission, and under whose care he remained, at once diagnosed a fracture of the spine corresponding to the last dorsal or first lumbar vertebra. The symptoms were those of pressure on the spinal cord.

At a consultation held the same day, Dr. McDonnell advocated the immediate performance of trephining. His colleagues, however, not taking his view of the case, the proceeding was negatived.

The idea of trephining was then given up until January 30th, 1865, when Dr. Brown-Séquard, happening to be in Dublin, saw him with Dr. McDonnell. He supported his view, and advocated the operation as a *dernier ressort*. Accordingly, it was performed February 3rd, 1865.

Previously to the operation, sensation existed normally in the thigh and calf of each leg. In the feet, sensibility was much impaired, the sole being quite anæsthetic. Paralysis of motion was almost complete in both lower limbs; no reflex movements could be excited. The bladder and rectum were absolutely paralysed; the urine was alkaline. The penis and scrotum were swelled, and the prepuce ulcerated. Bed-sores existed over the sacrum; and the left foot and leg were œdematous.

After the operation, sensation became normal everywhere. There was a marked increase of motor power in the muscles of the thigh; the patient, however, did not regain the power of moving his toes. After some days, the reflex phenomena as regards movements of the muscles of the thigh reappeared. The most remarkable improvement, however, was in the penis and scrotum, etc. The ulcerations improved; the swelling diminished; and the œdema of the left leg disappeared.

A fortnight after the operation, the bladder had regained considerable power, and the urine could be expelled with some force. However, the

patient sank on the seventeenth day after the operation, when it was found that inflammation had extended from the bladder to the kidneys, purulent depositions having been found in one of those organs.

On *post-mortem* examination, a displacement was found to have taken place between the last dorsal and first lumbar vertebræ, with fracture of a portion of the body of the latter. The theca vertebralis was uninjured; the cord compressed, but not lacerated.

The operation consisted in the removal of the posterior arch of the first lumbar vertebræ; and there is little doubt, had it been performed at an earlier period, there would have been a fair chance of interrupting the chain of sequences which led to a fatal result in this case.

The above is a mere sketch, as the whole details will soon be published in full by Dr. McDonnell.

The second case is one of no less importance than that just described, being the cure of an aneurism implicating the femoral and iliac arteries by compression applied to the common iliac and femoral vessels. The case occurred in the practice of Dr. Mapother of St. Vincent's Hospital, and presented extraordinary difficulties in its management. Among others, I may mention the fact of the treatment being carried out while the patient was under chloroform, and the combination of distal and proximal compression, so as to prevent complete emptying of the sac. This device is the suggestion of Mr. O'Farrell of St. Vincent's Hospital, and is a most valuable one. The prolonged chloroform inhalation was also most remarkable, having been sustained on one occasion for twelve hours. The cure of the disease was complete.—*Dublin Correspondent of the British Medical Journal, April 18th*, 1865.

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## CASE OF RECURRENT EPITHELIAL CANCER.

Under the care of Mr. Glascott R. Symes.

S. M. E., aged 48, admitted into hospital in December, 1864. The lower part of the left side of the face was occupied by a large epithelial open cancer of about three inches in diameter, its edges were everted, the surface raised and of a dusky red colour. In the situation of the submaxillary gland there was a cavity leading beneath the jaw; the whole was constantly bathed in a thin abominably fetid discharge.

The history of the case is very interesting. In the month of August last he was admitted into hospital for a sweep's cancer of the scrotum, which presented the usual features. There was at that time slight glandular contamination confined to the region of the groin; but as the sore was giving him much annoyance, and as the glandular disease when slight

often appears to be kept in abeyance when the local source of irritation is removed, the ulcer was excised by Dr. Tyner. The wound healed well. The cicatrix, five months after, was perfectly healthy. Before leaving hospital, he shewed Dr. Tyner, under whose care he was, a small wart situated near the left commissure of the lips; this was also excised, but there was no enlargement of the glands about the jaw.

When in hospital last he was much run down by the discharge, pain, and annoyance of the cancer in the face: he had enlarged glands in the right axilla; he had enlarged glands in both groins and iliac regions; both the cicatrices were healthy. It is needless to remark that nothing in the way of operative interference was attempted, under these circumstances.

This case illustrates well the recurring nature of cancer although there will be found some who deny that epithelioma is cancer. It likewise teaches us to be cautious in prognosis. There are many of these cases in which the operator can benefit the patient, even though the glands in the neigbourhood may have been contaminated; and on the other hand as in the present instance, there are many in which the knife not only does not afford relief, but even sometimes appears to hasten the recurrence of the disease, if we are to judge by the rapidity with which the affection is reproduced.

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## ABSTRACT OF A CLINICAL LECTURE ON TORSION, LIGATURE, AND ACUPRESSURE.

By James Syme, F.R.S.E., Professor of Clinical Surgery in the University of Edinburgh.

G. M——, aged 48, came from Wick, in Caithness, suffering under epithelial cancer of the lower lip. It was necessary, as you saw, to remove fully two-thirds of the lip by a V-shaped incision, and then to provide a substitute for supplying the gap by cutting into the cheek on each side from the angle of the mouth, sewing together the skin and mucous membrane of the new lip thus obtained, after the hemorrhage, which was profuse, had been arrested by torsion of the arteries, and then retaining the cut edges in close contact by silver sutures. Three days after the operation had been thus performed, you saw that union had taken place entirely and completely without a drop of matter, and you now see that the patient's appearance is perfectly natural, without the slightest discernible trace of anything having been done to the lip or cheek.

This case and others that you have seen of a similar kind suggest some important considerations with regard to union by the first intention

In the first place, they show that torsion of the arteries does not interfere with the adhesive process. It has been said that twisting a vessel so as to arrest the bleeding *must* cause sloughing of its extremity, and consequently *must* prevent the primary mode of healing. But, as "a grain of fact is worth a pound of reasoning," you will now know what value to place upon an opinion which has been so confidently expressed and so completely contradicted by experience. It has also been said that if ligatures are avoided in treating wounds of the cheek or lip, they should in consistency be as far as possible avoided upon all other occasions. But in the first edition of my "Principles of Surgery," published in 1832, I drew a distinction between wounds having one orifice and wounds having two orifices, as those of the cheek, joints, and great cavities, since the former, unless very small and superficial, do not admit of having their mouths closed completely without suffering such an accumulation of blood or serum as must effectually prevent adhesion of their surfaces, while the latter may have their edges brought closely together on one side without any effect of this kind, through the bloody and serous discharges finding vent from the other. This principle of practice I have constantly inculated, and year after year illustrated by cases such as the one which has led to my present remarks; so that the charge of inconsistency which has been brought against me reduces itself into a painful display of unacquaintance with the subject. When the wound is deep, and has only one orifice, ligatures, so far from being hurtful, are eminently serviceable, by maintaining an outlet for the fluids, which would otherwise be pent up, and lay the foundation of troublesome abscesses, while they do not to any further extent interfere with the adhesive process. Of this you have examples at present in two amputations of the thigh, where the stumps were healed within a fortnight after the operation; in two amputations at the ankle, where cicatrization was completed within the same period; in an amputation of the forearm at the advanced age of eighty; in excision of the elbow-joint; and in the removal of a fibrous tumour, nearly as large as his head, from the neck of a patient who had laboured under it for no less than fifty-seven years. I may also remind you of five operations for the removal of mammary tumours, which were lately under treatment at the same time, and in all of which the result was union by the first intention.

Through the careless and incorrect use of surgical language, ligatures have been most unjustly charged with causing gangrene and mortification; and I may therefore remind you that mortification implies, not merely the death of a part, but death through its own living action—in short, a sort of suicidal procedure; while gangrene denotes the form of inflam-

mation that produces this effect. But when a ligature is tied, the texture embraced by it is cut off from all communication with the circulating system, and at once deprived of vitality; so that the only action excited by it is the ulcerative absorption requisite for its separation, which is not attended with pain or disturbance of any kind. When, therefore, extraordinary efforts are used to shake your confidence in the ligature, and induce you to adopt other means for the suppression of hemorrhage, I consider it my duty to warn you against being misled by these representations, just as I have on various other occasions opposed innovations which seemed calculated to impair the practice of surgery. Thus, when it was proposed to abandon what may be truly called the perfect operation for hydrocele by injection with iodine, and to substitute for it the introduction of metallic setons, I expressed disapproval. When it was proposed to abandon the strictly limited and certainly effectual incision for fistula in ano, and resort in its stead to useless injections with iodine, I expressed disapproval. When it was proposed to burn out simple tumours with destructive caustic, instead of removing them by the knife, I expressed disapproval. When, instead of a slight incision, it was proposed to remedy fissures and spasmodic strictures of the anus by forcibly rending and roughly tearing through the parts concerned, I expressed disapproval. When it was proposed to suppress hemorrhage by means of needles instead of ligatures, I expressed disapproval, on the ground that such a procedure was uncalled for, inexpedient, and in most cases impracticable; so that, when contrasted with the facility, safety, and efficiency of the ligature, it reminded one of the powders for killing fleas, which required that each of them should be seized by the nape of his neck so as to make him gape and admit a mouthful of the poison. When other objectionable proposals were forced upon attention, I pursued the same course; but while thus defending my own province from the injurious inroads of a would-be improver, I have scrupulously avoided any interference with projects relating to other departments of teaching. Thus, when it was proposed to accelerate the progress of sluggish babies in entering the world by applying sucking-pumps to their tender scalps, however much commiserating the helpless victims of an inventive genius, I left the matter entirely to my obstetric colleague and his pupils. It appears that my example in this respect has not been followed, and that in a pamphlet recently published I have been charged not only with ignorance of my profession, but with want of good faith in teaching it. Such vulgar insolence I treat with the contempt it deserves.—*Lancet.*

# Medicine.

## REMARKABLE CASE OF PURPURA HÆMORRHAGICA, FOLLOWING SYPHILITIC CARIES OF THE BONES OF THE NOSE.

By Henry Lee, Esq., F.R.C.S., Surgeon to St. George's Hospital.

A gentleman had suffered for some months with disease of the bones at the back of the right nostril, and a piece of bone at one time had become separated, and was swallowed. A very large number of rupial looking sores formed on different parts of the body. These sometimes extended, sometimes healed, and at other times remained stationary. Occasionally, and generally when the ulcerations were better, he had very severe pains, accompanied by a considerable amount of swelling in different parts. These "rheumatic pains," as he called them, affected principally the elbows, wrists, and knees. The pulse was generally quick, weak, and occasionally irregular; and he had been under the care of several physicians for supposed disease of the heart. He frequently felt faint, and was in the habit of carrying some stimulant in his pocket.

On October 11th, after having been unusually depressed and uncomfortable, hæmorrhage occurred from both nostrils. This was followed by a swelling, which attained the size of a bean, on the lower lip. This swelling was formed of epithelium raised by effused blood. Spots of purpura appeared all over the body, but chiefly upon the arms. Hæmorrhage occurred from the gums, and from the mucous membrane of the eyes. The urine passed contained blood. The nostrils, from which the largest amount of blood passed, were now plugged.

12th; Three chamber-pots, each more than half full of bloody urine, had been kept. Hæmorrhage from the gums continued. The skin was yellowish. The mouth was occasionally filled with blood. There were hiccough and sickness. Some blood oozed from the penis.

13th: Three chamber-pots, each more than half full of bloody fluid, had again been passed. The contents of one of these vessels had become coagulated in one mass.

14th: Fresh spots continued to appear upon the skin. There was a continued sensation of sickness and occasional vomiting. Food and medicine were rejected, mixed with altered blood.

15th: The motions contained a large quantity of decomposed blood. The lips were blanched. Bleeding from the gums continued. The urine contained nearly the same amount of blood. Ruspini's styptic was ordered.

16th: The pulse had become more regular, and rather stronger. The

bleeding from the mouth had stopped. He passed a much smaller quantity of water. His lips had assumed a more natural colour.

17th: There was excessive restlessness. Many of the spots on the body and arms had assumed the appearance of large bruises. The bleeding from the mouth had recurred. He had great difficulty in swallowing.

Dr. Markham now saw the patient in consultation, and gave a decided opinion that there was no disease of the heart. Nothing could, after this, be kept on the stomach in any quantity; and the patient died on the 18th.

Dr. Dickenson was good enough to examine the body on the following day. The bones at the back of the nose were extensively diseased. Spots of purpura of various sizes, and presenting different colours, were scattered over the body. In the chest, the heart was found quite healthy. Spots of ecchymosis studded the surface and interior of the lungs. Similar spots existed on the convex surface of the diaphragm.

In the abdomen, spots of ecchymosis were scattered over the whole of the intestines, and could be seen of various sizes under the peritoneal covering.

The kidneys, which were otherwise tolerably healthy, were mottled throughout their structure and upon their surface with circumscribed patches of a very dark colour. These contrasted strongly with the appearance of the natural structure of the organ, and produced a very peculiar and remarkable appearance.

The pelvis of the kidney and ureter on each side was full of what appeared to be semi-coagulated blood. The intestines were filled with a brownish fluid, evidently composed principally of blood which had been changed by the secretions of the stomach and intestines.—*British Medical Journal.*

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## ON A SUPPLEMENTARY SYSTEM OF NUTRIENT ARTERIES FOR THE LUNGS.

By WILLIAM TURNER, M.B.Lond., F.R.S.E., Senior Demonstrator of Anatomy, University of Edinburgh.

It is a well-known fact in anatomy, that each lung has, in addition to the pulmonary artery conveying venous blood, one or two small nutrient arteries passing to it. These vessels, called bronchial arteries, are derived, as a rule, either from the thoracic aorta, or in part from that vessel, and in part from its upper intercostal branches. In this communication I wish to show that these usually described bronchial arteries are not the only nutrient vessels of the lung,

but that it receives, in addition, a number of slender supplementary nutrient arteries from other quarters. If the systemic arterial arrangements in the cavity of a healthy thorax be carefully injected with size and vermillion, or other colouring matter, and the pleural cavities then opened by removing portions of the ribs, and muscles attached to them, the general distribution of the arteries in the thoracic walls may be examined without difficulty. The vessels to which I wish more particularly to direct attention are the internal mammary arteries and the trunks of the thoraric intercostals, as they lie in relation to the bodies of the dorsal vertebræ. From each internal mammary artery, besides other branches to which I need not now refer, arise sundry small arteries known as pericardiac and mediastinal branches, and a long branch accompanying the phrenic nerve and passing along with it to the diaphragm. These vessels are all situated beneath the mediastinal pleura, and lie, therefore, between it and the pericardium. They do not, as is implied in the descriptions usually given in anatomical works, end simply in the fibrous bag of the pericardium, in the fat of the mediastinum, the thymus gland and the diaphragm, but they give off, in addition, branches which anastomose and form an arterial plexus, which from its position may conveniently be termed the sub-pleural mediastinal plexus. The general arrangement of this plexus can be examined without using either knife or forceps, by drawing the lung outwards, and tracing the slender arteries filled with injection beneath the transparent mediastinal pleura. The arteries are elongated, thread-like vessels, of almost uniform calibre throughout, and the mesh work which they form by their intercommunication is open and irregular.

If now the lung be raised from its position and thrown forwards, the thoracic and superior intercostal arteries may be seen in relation to the bodies of the dorsal vertebræ, and from the greater number of them fine arteries arise similar in their characters to those just described. These vessels lie beneath the posterior mediastinal pleura, and supply the fat, areolar tissue, and glands of the posterior mediastinal space, and the hinder part of the pericardium. Those on the right side lie in close relation to the œsophagus and anastomose with its proper arteries. Those on the left side run forwards in close relation to the outer coat of the descending thoracic aorta. These fine arteries also anastomose with each other, and form the posterior portion of the sub-pleural mediastinal plexus. Above and below the root of the lung they send branches forward which inosculate with the division of the plexus lying in front of that structure. In giving a description therefore of the anastomoses of the internal mammary and intercostal arteries,

it is not sufficient to refer merely to those occurring in the diaphragm and costal walls, but the inosculations between the vessels forming the anterior and posterior divisions of the sub-pleural mediastinal plexus must be included. This plexus is interesting, not only because it serves to afford an additional channel of communication between the arteries of supply for the thoracic wall, but because from it the supplementary system of nutrient arteries for the lungs arises.

In a healthy well-injected thorax, these vessels may be seen without any difficulty, passing to the lung in the following manner:—Some proceed from the anterior division of the sub-pleural mediastinal plexus in front of the root of the lung, to its inner aspect; others from the posterior division of the plexus pass behind the root of the lung, and others reach it by running between the two folds of the pleural membrane, known to descriptive writers as the ligamentum latum pulmonis. Having reached the lung by one or other of these three routes, the fine thread-like arteries are distributed as follows:—Some pass deeply into the root of the lung, and run along with the bronchial tube into its substance; others again, and these apparently the greater number, are more superficially placed, and may be readily traced beneath the pulmonic pleura for a considerable distance; not unfrequently they accompany those branches of the pulmonic vein which lie near the surface of the lung. From the mode of origin and general distribution of these arteries, there can, I think, be no doubt that they are fine accessory nutrient vessels, and supplement, therefore, the bronchial arteries in their distribution. I am unable to state, with certainty, the exact mode of termination of these vessels in the lung; but from their close analogy to the bronchial arteries in their distribution, it may, I think, be safely assumed that those which pass any distance, either in the substance or on the surface of the lung, end in the pulmonary system of vessels, either arteries, capillaries, or veins.

The sub-pleural mediastinal arterial plexus from which these vessels arise presents several interesting relations, of which it may not be amiss to say a few words. From the circumstance that, on the one hand, it anastomoses with the arteries which supply the parietes of the thorax, and, on the other, that it is in communication with the vessels of the lung, it serves to place the vessels of the latter in direct communication with the arteries of the wall—a relation the importance of which will be readily recognized. In a paper published in the *Medico-Chirurgical Review* for July, 1863, I recorded the results of some observations on the arrangement of the arteries in the abdominal cavity, and I pointed out that there existed in the fat and areolar tissue behind the peritoneum

a well-marked arterial plexus to which I applied the term of sub-peritoneal arterial plexus. Through it, not only are the arteries of one viscus in vascular communication with those of another, but the arteries of the abdominal wall are in communication with the visceral arteries, so that one set of vessels may be injected through the other. The sub-pleural mediastinal plexus now described, so far at least as it affords a medium of communication between the visceral and parietal arteries, has in the thoracic cavity an arrangement closely comparable to that of the sub-peritoneal plexus in the cavity of the abdomen.

I believe that in certain cases of malformation of the heart this sub-pleural plexus would, if carefully examined, be found to have assumed a size and relative importance greater than that which it possesses under ordinary conditions. I refer to those cases in which the pulmonary artery is obliterated, and the ductus arteriosus closed, so that the supply of blood to the lungs is derived from other sources, and would suggest that those who may have opportunities of examining cases of this kind should inject this system of vessels.

In conclusion I may state, as a general result of my injections in these and other localities, that though the area or domain appropriated to each artery is, as a rule, clearly defined, yet that where adjacent areas are in contact, the arteries of one almost invariably inosculated with the arteries of another, and under some conditions, actually encroach upon the domain of another.—*Medico-Chirurgical Review.*

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## THE ACTION OF THE LIVER ON FOOD, ETC.

What is the function of the liver, is still an unanswered question. The researches of Bernard, Dr. Pavy, and others, have not yet told us the whole of the physiology of that organ, although they have told us very much of it. Bernard's theory of the glycogenic power of the organ is denied by Dr. Pavy; and Dr. Pavy's view is now supported by Dr. Robert McDonnell.

That the liver secretes bile, all the world knows, and has long known; but what it does in addition to this, is what we have yet to learn, and want to know. Modern discovery seems to indicate that the mere secretion of bile is probably the least important part which the organ plays; or rather, we should say, that the secretion of the bile is only one part of its complex function; that, while it is secreting bile, it is also forming some other important materials—perchance some blood constituents. Its power of making and storing up an amyloid (starchy) substance in the liver is certain, as Bernard showed; but Bernard, we are now told, erred

in supposing that this glycogenic (amyloid) matter is converted into sugar, which passes into the hepatic veins, and is consumed in the lungs, producing heat. Dr. Pavy denies this, and has given very strong experimental facts to show that during life, and under natural conditions, the amyloid matter is never converted into sugar. And, in support of this view, it has been argued: Let those who assert that the amyloid matter is converted into sugar, and used up as a heat-producer in the respiratory process, tell us what becomes of the amyloid matter which is formed and used up in the tissues of the fœtus before respiration begins. Dr. McDonnell agrees with Dr. Pavy that, during life and health, the liver does not convert its amyloid matter into sugar. He holds that its conversion into sugar during life is a deviation from the healthy process. What, then, becomes of this amyloid matter in the liver? Dr. McDonnell believes that the liver is

"A great blood-making organ, in which there is constantly going on a reconstruction of certain ingredients of the blood; that in it the fibrine, etc., which has done its work, is disintegrated; the hydro-carbons of the bile abstracted; and the nitrogen combined with amyloid substance, which, instead of being normally changed into sugar, emerges from the liver as a constituent principle of the protoplasma."

This is the theory which Dr. McDonnell discusses experimentally in his pamphlet. He first of all examines and corroborates Dr. Pavy's facts tending to show that the amyloid substance is not transformed into sugar during health and life. He then inquires into the physiological relations of the amyloid substance; and, lastly, into the characters, etc., of the blood which enters, and of the blood which leaves the liver; and from his experiments deduces the conclusions above given.

One very important practical lesson is to be drawn from these physiological investigations. Bernard, Dr. Pavy, and Dr. McDonnell are all agreed in this, that amyloid substance may be formed in the body out of nitrogenous articles of food. Also it appears, if Dr. McDonnell's views be corroborated, that not only can this body of man convert albuminous, nitrogenous, food into starchy, carbonaceous food, but that it can also, through the liver's aid convert amylaceous matter into a nitrogenous base. Enough, at all events, is taught us by these valuable experiments; and it is this—that the fascinating theories of Liebig on food, which have now so long and still so firmly possess the minds of the public and the profession, require reconsideration. Look only at one single article of diet, so largely used in our hospitals; we mean beef-tea. Consider, its enormous consumption, and, therefore, its immense cost; and then let us ask ourselves: Are we sure—have we any sound basis on which to rest the

conclusion which we seem so unhesitatingly to have embraced—that in using beef to make beef-tea, and feeding the sick on it, we are acting wisely and economically—using all the nutrition in the beef, and giving the sick the best kind of food? We beg to suggest that, in the matter of this one article of diet, there are very fair reasons to believe that we are, in fact, yearly squandering away the funds of our hospitals; in other words, that we are wasting very large and very expensive quantities of food, and deluding ourselves as to the food—we mean really nutritive matter—which we give our patients. If, for example, a pound of beef, free from bone and fat, is to be converted into a pint of beef-tea (which, if boiled down, would not contain, perhaps, more than half an ounce of solid matter), is it not reasonable to suggest that the greater part of the *meat* is absolutely wasted? Are we really to believe that all the solid materials—the *bouilli*—left after the manufacture of the soup, is useless as food? More than this: Are we sure that this beef-tea is really the best and most agreeable nutriment which we can give to the sick stomach? We sincerely trust that some of our large hospitals, where the consumption of beef-tea is very large, and where it must figure as a very serious item of expenditure, will seriously take this question into consideration. We verily believe that, in this matter, the professional and the public mind is labouring under the charm and delusion in which they have been caught by one of Liebig's fascinating formulæ. We will venture to say that it has never yet been *proved* that the beef-tea *à la Liebig*, or any other way manufactured, really does possess those highly nutritive qualities usually ascribed to it. And we may add, that the way of using meat now so extensively employed by physicians in St. Petersburgh, and especially for sick children, is well worthy the general attention of the profession; we mean, as raw meat chopped up very fine, and made into a savoury mass. Trousseau and other Paris physicians employ and speak in very high terms of meat thus administered.—*British Medical Journal.*

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## ON THE TREATMENT OF ANEURISM BY LEAD.

By G. Owen Rees, M.D., F.R.S., Physician and Lecturer on the Practice of Medicine, Guy's Hospital.

The following case may perhaps be read with interest, as illustrative of the treatment of aneurism on a new plan—viz., that of introducing lead into the system, as a remedy possessing the power of facilitating the coagulation of the blood, a full diet being given at the same time. My chief object in publishing the case is to induce others to treat aneurism in like manner, in order that the fact I have observed may assume its

proper value, and be regarded either as a mere accident or as an effect of the treatment employed. The case was carefully watched and reported by my young friend, Mr. Benjamin Duke.

W. F——, aged 27, residing at Greenwich, was admitted into Stephen ward, Guy's Hospital, on the 26th of Oct., 1864, under the care of Dr. Owen Rees. He was the subject of popliteal aneurism, and had been taken in by Mr. Poland, who transferred the case in order that Dr. Rees might have an opportunity of making a therapeutical experiment.

The patient states that seventeen days ago he was out walking when, on standing still, he felt pain under the left knee. The pain was relieved by flexing the knee-joint. He then observed a tumour over the seat of pain, which has increased in size up to the present date, but has never caused him much trouble. He has ulcers and varicose veins on both legs, the left being the worse. He is a strong, healthy-looking man, single, and a teetotaller, and has always enjoyed good health. Has worked very hard lately. The heart-sounds may be considered normal, if we except a slight prolongation of the second sound. The bowels are generally costive. A distinct bruit is heard over the seat of the aneurism, and pulsation is well-marked.

Mr. Poland's description of the tumour is as follows:—"The aneurism was of the size of a duck's egg, and its contents were perfectly fluid. The walls were excessively thin, so that it was feared rupture would take place. Arrangements were made to commence compression at once, and a failure ensued. Deligation of the artery to be performed. Pressure on the artery above readily commanded pulsation, and was attended by complete emptying of the sac without apparent trace of coagulation. It was considered that the opening of the artery into the sac was of large diameter."

Oct. 29th: Ordered three grains of acetate of lead and one grain of opium powder three times a day; to have full diet, and a chop for breakfast.

Nov. 1st: A slight blue line on the gums. 4th: Complains of loss of appetite, and has frequent calls to stool; the bowels, however, do not act. 5th: Ordered five grains of acetate of lead and one grain of opium powder three times a day. 18th: He complains of loss of appetite. His condition is much the same as on the 4th. Ordered an ounce of castor-oil immediately. 24th: The swelling in the popliteal space has been gradually hardening and enlarging, apparently owing to the deposit of fibrin within the sac of the aneurism. 26th: Ordered two drachms of castor-oil immediately.

Dec. 2nd: Is obliged to discontinue taking the pills on account of

the colic produced. The pulsation in the tumour is very much less. 3rd: Feels easier; has had pain in stomach. Ordered the magnesia and salts mixture twice a day. 5th: Slept badly, having pain in his stomach; his appetite has much diminished. 12th: The pulsation has ceased, but the tumour is larger and more tender, and he cannot straighten his leg on account of the mechanical obstruction caused by it. 15th: Mr. Hilton found that by pressing the femoral artery he could effect the sac, but thought the aneurism was almost cured. The patient has now a clear, well-defined blue line on the margins of the gums, and feels no pain in the stomach. The articular arteries of the left knee-joint can be seen pulsating very distinctly. 17th: The tumour, which almost fills the popliteal space, is diminishing in size. He can nearly straighten his leg. The left leg is flabby, and swells if he stands much upon it, and it measures two inches more in circumference than the right. 20th: The tumour is fast diminishing in size. 31st: He has left the hospital to return to his work.

On Jan. 17th he came to the hospital to be examined by the surgeons, and was seen by nearly the whole surgical staff, amongst the rest by Messrs. Cock, Hilton, and Birkett. He was considered to be perfectly cured. He states that he cannot walk far without feeling a numb sensation over the calf of his left leg, circulation by anastomosing branches being not yet freely established. He has been able to do his work. There is still a clear, well-defined blue line on the margin of the lower gum; the upper is less affected. There is also some enlargement in the popliteal space, which he feels somewhat inconveniently when walking.

It will be observed that the doses of lead were large and continued. Thus three grains of the acetate were given three times a day for six days, and then an increase was made to five grains, a grain of opium being given with each dose. This five-grain dose was continued for twenty-six days. With regard to the pains in the abdomen, they never amounted to colic, and my surprise is that the patient did not suffer more. His attention was directed to the probable occurrence of such pains, and latterly he was inclined to exaggerate them. Though rest was enjoined, the patient would not submit to it. He walked about the ward as it pleased him, and, I am informed, danced on one occasion for the amusement of his companions. It is worthy of remark that when the lead had been taken for three weeks the aneurism had hardened very obviously, and my belief is that we might be content to discontinue the lead should an aneurism begin to change as above described. The system is charged with the metal, and the deposit once begun, we may fairly expect it will continue to the filling up of the sac.

It may be well to mention that the only other case of aneurism in which I have exhibited lead was in that of a man the subject of so advanced a stage of thoracic aneurism that spinal absorption had occurred and paraplegia had been produced. The tumour was clearly visible on the left side of the spine. The case was obviously hopeless, but I gave the lead, in order, if possible, to ascertain what effect it might produce on the structure of the fibrin in the sac on post mortem examination. The man, however, left the hospital, and, I hear, died shortly afterwards. —*Lancet.*

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## HYPODERMIC MEDICATION.

Under this title Dr. McGugin, of the University of Iowa, gives some interesting cases of the effects of subcutaneous injection of morphia. His list, he says, embraces but a few of all the cases, in all of which the results were nearly as prompt and efficient. 1. In the summer of 1862, a soldier was admitted into hospital who had been wounded in the foot by a rifle-ball. The wound was still discharging, and in a few days several small spiculæ were removed. The wound healed, and he was able to walk with trifling difficulty. In jumping, however, one day, he again injured his foot, which inflamed so much as to confine him to his ward and bed. Trismus appeared during the third night, and by morning the jaws were so tightly closed that speech and deglutition were impossible, and the respiration very laborious. The index finger of the right hand was contracted, and there was some disposition to opisthotonos. Chloroform by inhalation, and endermically applied along the spine, with enemata of tincture of opium, had been the treatment. Very soon afterwards Dr. McGugin saw him. A free incision into the old wound was followed by a discharge of pus, but with no apparent relief. By a small glass syringe, one-third of a grain of acetate of morphia in one drachm of distilled water was injected into the cellular tissue of the arm opposite the insertion of the deltoid muscle. In about half an hour there was some relaxation of the muscles of the jaws. Water was introduced, and a little swallowed with a painful effort. At the expiration of an hour more he swallowed with less difficulty; and in half an hour more, making two hours from the first injection, as he did not seem to improve further, the same amount was injected into the other arm at the same point. In an hour from this second injection he slept soundly, and the respiration was much less difficult. This condition was maintained during the night. He was roused with some effort in the morning, when he asked for water, which was the first word he uttered since the trismus was observed. There was some effort and also some pain in

swallowing the water, nor could he turn his head to either side. He soon sank to sleep again, and slept as profoundly as before. He continued to sleep, at intervals, for two days, when the trismus had entirely disappeared, and the flexors of the index finger were relaxed. In a few days a spiculæ of bone was removed, after which the wound healed permanently. 2. In a case of delirium tremens in a habitual drunkard—a soldier, opiates given by the mouth failed to procure sleep. The hypodermic injection of one-third of a grain of acetate of morphia procured sleep; and a speedy recovered followed. 3. In the case of another soldier who was delirious, and in which nothing could be given, either by the mouth or by injection, which would have any effect in mitigating the symptoms, the hypodermic injection of morphia into the cellular tissue calmed the delirium in less than half an hour, and quiet repose followed. 4. A soldier whose vital power had been much expended by severe duty in the field, and an attack of camp diarrhœa, was seized, since admission, with pneumonia, and sank rapidly. Two days before his death he was wild and frantic, requiring two, and often three nurses to confine him to his bed. His screams were loud, and he was resolutely determined not to take any medicine, nor would he swallow water or any other fluid. Acetate of morphia was injected in the dose of one-fourth of a grain; and in less than an hour he was fully conscious, and continued so until his death, which was easy and tranquil. 5. A washerwoman, aged 45, employed in the hospital, had eaten of fruit too freely, and was attacked with spasms of the diaphragm, stomach, and bowels. The gastric irritation was so great that small portions of morphia placed upon the tongue promptly induced emesis, and were thrown off as fast as given. The injection of acetate of morphia into the tissues of the arm was followed by relief in ten minutes; and in twenty minutes she was asleep, and arose next morning declaring herself "weak, but well. 6. A lady in this city had for some years been subject to frequent and severe attacks of facial neuralgia. Quinia and morphia and all other appropriate remedies had been resorted to, beside a *quantum sufficit* of potent nostrums, all of which were alike unsuccessful. The paroxysms returned every two weeks, and were more and more severe. Having been sent for in one of her alarming attacks, and finding that reason was suspended, Dr. McGugin at once introduced into the arm the salt of morphia; and in less than half an hour she was entirely relieved of her agonising sufferings, soon was asleep, and has not had a paroxysm since then, which was in May last. 7. Another lady of delicate frame suffered much after her confinement three months previously with sciatica. Hypodermic injection of acetate of morphia on the lower spine, repeated three times,

relieved the pain, and she gradually recovered. After each operation she was entirely relieved, and remained so during a week, when the pain would return again, but not so severely, and finally it disappeared altogether. What advantages are secured by this mode of medication? 1. The remedy does not oppress the brain so much, nor do those unpleasant consequences follow its use by this method as when given by the mouth. 2. Less is required than by the mouth. 3. It requires much less time to produce the same effect. 4. In very many cases in which the effect of opium is desirable, the gastric complications prevent its accomplishment.—*Philadelphia Med. and Surg. Reporter.*

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## INOCULATION OF SYPHILIS FROM THE DISCHARGE OF A SECONDARY SORE.

THE DISCHARGE BEING COMMUNICATED FROM THE MOUTH OF THE HUSBAND TO THE WIFE'S CHEEK. CLINICAL REMARKS. — The following very interesting and instructive case is given from notes by Mr. Anderson, the dresser of the patient:—

Catherine W——, admitted Nov. 16th, 1864, with an indurated, distinctly circumscribed swelling of the size of a five shilling piece, situated immediately above the left angle of the mouth. It was a reddish purple color in the great part of its area, but had in the centre a patch of excoriation of the size of a shilling, but without any ulceration. Under the jaw of the same side several lymphatic glands were enlarged and indurated. She also complained of sore-throat, but there was no ulceration of the tonsils. These symptoms had lasted for several weeks before the time of her admission. She had been married eight years, but has had no children, and has not miscarried. Never had any primary sore. The pain in the face was very severe, and for this symptom she applied for relief.

Mr. Watson considered the swelling suspiciously like a chancre, and in consultation with Mr. Henry Smith expressed this opinion. It was, however, decided that specific treatment should be withheld until constitutional symptoms showed themselves, especially as the very severe pain in the part gave the appearance of the case being one of facial carbuncle.

The treatment adopted consisted of the administration of tonics and opiates; and this was continued with no improvement in the local condition for several weeks. The swelling increased in size circumferentially, and became somewhat more prominent, and softer in the centre; but no true ulceration occurred; and when punctured on Nov. 28th no pus was found, but the section presented a brawny character, as if infiltrated with fibrin, and very rapidly closed up by primary adhesion.

*14th.*—Swelling increased in all directions: bulges forward in the centre, where there is indistinct fluctuation.

*30th.*—For the last ten days she has not presented herself. On inquiry it was found that she had been an in-patient at a large London hospital for a few days, where the surgeon under whose care she was placed proposed, according to the patient's account, to remove the tumour with the knife. At the same time she had been rubbing in mercurial ointment, and her gums are spongy and sore. An eruption of syphilitic lepra has come out on the face and body, and her tonsils are ulcerated. The swelling has increased in prominence, is softer, covered with pale, smooth, moist granulations. More direct questions were now put to the woman, and she stated that her husband was at present attending as an out-patient under the care of Mr. Henry Smith. He (the husband) was at once sent for, and Mr. Smith pointed out a secondary ulcer on the inside of the cheek, for which he had been under specific treatment some weeks past. The man denies having had any primary sore on the penis, but had a urethral discharge in June last.

Mercurial treatment continued up to the present date (Jan. 13th. 1865). The sore is diminishing in size rapidly in all its dimensions, and is cicatrizing at the edges. The eruption has disappeared.

The following clinical remarks were made by Mr. Watson:—

The diagnosis from facial carbuncle was somewhat difficult in the absence of any distinct history, and it was only the very circumscribed character of the induration and the bubo under the jaw which gave a suspicious aspect of syphilis to the case. The chain of evidence subsequently produced was unusually satisfactory, and this case alone would be conclusive as to the transmissibility of secondary syphilis. Mr. Henry Lee, who examined the patient at the Medical Society of London on the 9th January, and made a careful examination also of the sore on the mouth of the husband, was perfectly satisfied of the nature of the case. The history and progress of the case are analogous to those mentioned by several recent authors.

A very interesting case bearing upon the question of the transmission of the poison through secondary inoculation was mentioned at the meeting of the Medical Society of London by Mr. Henry Smith. It was that of a gentleman well known to him, and who had a suspicious sore on the upper lip, which would not heal. Six weeks after the sore first appeared, a well marked secondary eruption came out. The patient was placed under the influence of mercury, and he rapidly got well. This patient strongly denied any illicit intercourse, and there could be little doubt that the sore must have been produced from contact with a secondary ulcer on the tongue or lip of the female.—*Lancet*, Feb. 4th, 1865.

# Canada Medical Journal.

MONTREAL, JUNE, 1865.

## TO OUR READERS.

With the present number the first volume of the *Canada Medical Journal* is brought to a close. How far we have succeeded in producing a journal worthy of the support of the profession, it is not for us to say—yet we cannot help acknowledging the many kind letters which have reached us from all sections of the Province—letters that have done much to cheer our editorial labour—which, amid the anxieties of a general practice, occupy not a little of our time and attention. Our aim and our ambition is to place our Journal in the hands of every medical practitioner in Canada, and make it to him a valuable monthly visitor. To a certain extent we hope we have succeeded. Our subscription list embraces many of our brethren, but not *all*. May we ask those who now receive it, to aid in extending our circulation? The expenses attendant upon publishing our Journal are large, and the publishers, we may be pardoned for saying, have produced it in a style not excelled by any medical periodical on this continent. To the profession they look for support. Profit they do not anticipate. So far we must say our expectations have been realized; and if those who have not yet remitted the amount of their subscriptions would do so at once, we would enter upon our second volume with the satisfaction of having the first one clear of debt. We have been favoured during the year with many interesting and valuable contributions, and our prospects for the next volume of having the same favour extended to us, is, we are glad to say, encouraging. We have been promised, if the health of the person admit, several valuable papers on syphilis,—a question, we must say, not properly understood by the mass of practitioners. But while we acknowledge the helping hand that has thus been extended to us, we regret that so few of those who have grown grey in the service, have been found to give us information from the abundant store of their experience. We know how heavy are the calls of practice upon them; yet we feel they have a duty to fulfil to the profession, which they

neglect by thus holding back. Elsewhere those similarly situated do not act thus; if they did, the progress of our profession would be slow indeed. The profession in Canada, though now occupying a much better position than it did a few years ago, has not yet attained the position it is entitled to; and to its elevation our best efforts will be directed. It is ever hard to obtain reforms—imagine then the difficulty to obtain our just position from a legislature which legalises almost every system of tom-foolery which exists under the sun. But we will work steadily—perchance some day we may get our reward. With the increase of our population, quackery is getting bold—and for our own protection as well as that of the public, some step must be taken. To this we will give our attention. In a few weeks we will issue the first number of our second volume, and we trust to have all our old subscribers with us, as well as many new ones. Letters on all matters of interest to the profession are requested, and will be answered through the Journal.

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## QUARANTINE STATION.

We have received information from a source perfectly reliable that the officers in charge of the Quarantine Station at Grosse Isle have received instructions from the Government to exercise special care in the examination of all immigrant vessels, and that in case of the arrival of typhus fever on ship-board, to communicate the fact at once to the head officer at Quebec, so that every precaution may be taken tending to prevent the spread of the disease. This is as it should be. We would gladly see our corporation issue strict orders, and follow them up, of cleaning our back lanes and yards. There is such a thing as typhus fever being generated by local causes, independent of immigration.

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## MONTREAL GENERAL HOSPITAL.

The Annual Meeting of the Corporation of this noble charity was held on the 16th of May, when the 43rd Annual Report was presented. From it we gather the following items which we know will be of interest to many of our readers. The total amount of moneys received was $14,925.-53, to which may be added the tonnage dues of 1863-4, which were not received till after the close of the fiscal year. They amounted to $2452.-97, making the entire money receipts of the institution for the past year $17,378.80. The expenditure was a good deal above the receipts, owing

to the high price of provisions, the increased number of patients admitted to its wards, and extensive alterations and improvements which the Committee of Management deemed necessary. The amount disbursed being $18,042.06, which, compared with the receipts, not including the two years tonnage dues, shows a deficiency of $3716.53. The amount paid by students for tickets was $632.00. The number of patients who participated in the benefits of the hospital during the year were 8,694, of which 1,400 were in-door, and 7924 out-door patients. Of the in-door patients 1202 were cured or relieved, the deaths were 94, and at the time of report 104 remained in hospital. We are glad to notice that the Committee have not lost sight of the great necessity which exists for the erection of a separate building for small-pox, and other contagious or infectious diseases, and only await a revival of business to appeal to the liberality of our citizens. We trust they may not have long to wait. We would, before closing, again remind the committee of the great necessity which exists to provide the hospital with a new and improved operating theatre. We trust that much needed improvement will be effected before the session of McGill University opens.

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## COLLEGE OF PHYSICIANS AND SURGEONS OF LOWER CANADA.

The semi-annual meeting of the Board of Governors of the College of Physicians and Surgeons of Lower Canada was held at the Mechanics Institute, Montreal, on the 9th of May.

PRESENT: Drs. Marsden, Tassé, Marmette, Landry, Blanchet, Weilbrenner, Robitaille, Michaud, Peltier, Munro, Russell, Brigham, Boyer, Foster, Tetu, Robillard, Fenwick, Smith, Howard, Worthington, Gilbert, Boudreau, Hamilton, Smallwood, Tessier, Chervefils, Sutherland, Dufresne, Chamberlin.

The President took the chair at 10 o'clock, a. m.

The minutes of the meeting held at Quebec, on the 11th October last, were read.

Moved by Dr. Blanchet, seconded by Dr. Fenwick, and resolved, "That the motion proposed at the last meeting, in October, 1864, on the subject of payment to Drs. Blanchet and Sewell, for travelling expenses to Montreal, be rescinded from the minutes of the College, and that the minutes of the last meeting, so amended, be adopted.

Dr. Blanchet then returned ten dollars to the funds of the College, being the amount paid to him for travelling expenses, and referred to in the above resolution.

Excuses for absence were read from Drs. Von Iffland, Scott, and Turcotte, and received as satisfactory.

The President handed to the Treasurer twenty dollars, being the amount of a fine levied under a judgment against a Mr. Ouellette, for practising without license. Dr. Hamel, of Saint Croix, received authority to prosecute Mr. Ouellette in the name of the College.

The Board was informed of the removal of Dr. Smallwood's residence from the district, to the city of Montreal, and his seat was declared vacant. The Board immediately proceeded to fill up the vacancy by an election by ballot, and Dr. Dufresne was unanimously elected a governor for the district of Montreal, to replace Dr. Smallwood.

The result of the ballot to fill up the vacancy caused by the death of Dr. Jones was filled up by the election of Dr. Smallwood thereto.

The election, by ballot, for a Registrar and Treasurer, in the place of the late Dr. Jones, resulted in the election of Dr. Boyer.

Moved by Dr. Chamberlin, seconded by Dr. Smallwood, and resolved, "That since our semi-annual meeting, in October last, it has pleased Almighty God to take from amongst us our efficient and worthy Registrar and Treasurer, Dr. Thomas Walter Jones, one of the early members of this College; and, while we deeply deplore his loss to us, for his honest, upright, and straight-forward conduct, we do, in all sincerity, mingle our regrets with his bereaved and sorrowing widow, and would, by this resolution, convey to her our deepest sympathy and condolence, and that the Secretary convey to her a copy of this resolution."

Drs. Marsden and Peltier became security, each, in the sum of fifty pounds currency, for Dr. Boyer, the Registrar and Treasurer of the College, and furnished their joint bond to the College to that effect, dated, Montreal, 9th May, 1865.

Dr. J. Louis Bacon, of St. Thomas, district of Quebec, and Dr. John Erskine, of Waterloo, district of Montreal, were elected, by ballot, members of the College.

Applications for membership were received from the following gentlemen:—Dr. L. E. Bardy, of Quebec, Dr. Joseph Godric Blanchet, district of Quebec, aad Dr. Réné Bedard, district of Quebec.

Dr. Peltier read a letter from Dr. Shaver, calling upon the College to reimburse him the costs of an action for libel, instituted by him against a Mr. Linton. Dr. Shaver stated in his letter that Dr. A. Hall promised, as President of the College, to defray his expenses.

Moved by Dr. Gilbert, seconded by Dr. Howard, "That the Secretary be requested to communicate with Dr. Shaver, and ascertain whether he can furnish any evidence that Dr. Hall, as President of our College,

authorized him, officially, to prosecute the action to which his letter refers.

Moved, in amendment, by Dr. Landry, seconded by Dr. Tetu, "That the College of Physicians and Surgeons of Lower Canada does not consider itself, in any manner, responsible for the expenses incurred by Dr. Shaver, in an action instituted by him against a Mr. Linton, for libel; and that Dr. Shaver has no claim against the said College." The amendment was passed unanimously.

Dr. Hall, having entered the room, stated to the President that he had not authorized Dr. Shaver to incur any expenditure on behalf of the College.

The Board instructed Dr. Peltier, the Secretary, to insure the portrait of the late Dr. Arnoldi, senior, the first president of the College.

Moved by Dr. Smallwood, seconded by Dr. Foster, and resolved, "That Drs. Marsden, Tessier, and Russell be named a Committee for the purpose of carrying through the three branches of the Legislature a Bill to regulate the sale of poisons."

Moved by Dr. Gilbert, seconded by Dr. Chamberlin, and resolved, "That Drs. Howard, Robillard, and Smallwood be named a Committee to draft a petition to the three branches of the Legislature, to authorize the formation of a Medical Benevolent Fund for the College of Physicians and Surgeons of Lower Canada, and that the Quebec Committee, on poisons, be requested to assist in the passage of the said petition."

At one o'clock, p. m., the President adjourned the meeting for one hour.

At two, p. m. the Board re-assembled.

Dr. Howard read the report from the Committee on the subject of the expediency of establishing a class of Fellows in the College. The report was read in French by Dr. Robillard, and elicited a lengthy and interesting discussion. It was received, and is to be again brought up for discussion at the triennial meeting in July next.

Here the general business of the College terminated, and the examination of candidates was commenced and continued till five p. m., when the Board adjourned till seven p. m.

The members dined together as the guests of the members for the City of Montreal.

7 o'clock p. m. The Board reassembled. The examinations were continued till 10 o'clock p.m., and then adjourned till 9 a.m., the next morning. The names of the governors present at the time of the adjournment, were ordered to be taken down. Present: Drs. Marsden,

Landry, Tessier, Robillard, Peltier, Tetu, Russell, Blanchet, Foster, Tassé, Dufresne. The meeting then adjourned.

MONTREAL, Wednesday, 10th May, 1865.

At 9 o'clock a.m., the Board met.

Present; Drs. Marsden, Smallwood, Landry, Chamberlin, Brigham, Foster, Tassé, Munro, Dufresne, Peltier, Michaud, Tétu, Weilbrenner, Robitaille, Boyer, Boudreau, Chevrefils, Marmette, Gilbert, Blanchet, Smith, Tessier, Howard.

Examination of candidates was continued. At 1 o'clock, p.m., the Board adjourned for one hour. At 2 p.m., the Board reassembled. The examinations were continued till all the candidates were examined. The last candidate who presented himself was Mr. Thomas Merrill Prime, who claimed his right to be examined by the Board for a license to practise, by virtue of an Act of the Provincial Parliament, passed for that purpose. The validity of the claim was admitted, and five members were named by the Board to examine this candidate in the presence of the Board. The members named were Drs. Landry, Howard, Marsden, Peltier, and Russell. The examinations being now completed, the Board resumed the general business of the College.

Applications for membership were received from Drs. Mayrand and Gariepy.

The Auditors' Report was read and unanimously adopted.

Moved by Dr. Howard, seconded by Dr. Landry, "That in future, the examinations for the license of the College of Physicians and Surgeons of Lower Canada, shall be conducted in writing; and at the first regular meeting, after the triennial, three governors shall be nominated examiners on each of the following subjects,—a different three for each subject,—viz., Anatomy, Chemistry, Materia Medica, Institutes of Medicine, Theory and Practice of Medicine, Surgery, and Midwifery, and two governors shall be nominated examiners,—a different two for each subject,—on Medical Jurisprudence and Botany. That three questions upon each of the subjects shall be proposed to each candidate, except in case of Medical Jurisprudence and Botany, upon each of which two questions shall suffice. Three hours shall be allowed for the written examination. The examiners shall have the option of interrogating the candidates upon their written answers, when it may be thought necessary. The candidates shall attach a motto instead of their real name.

Dr. Tessier moved in amendment, seconded by Dr. Robillard, "That the question of changing the mode of examination proposed by Dr. Howard and seconded by Dr. Landry, be taken into consideration, as

the first order of the day, at the next semi-annual meeting." Amendment passed.

Moved by Dr. Munro, seconded by Dr. Howard, and resolved unanimously, "That the thanks of the governors of the College of Physicians and Surgeons of Lower Canada are due, and are hereby tendered, to the authorities of the Laval University, for the kind manner in which they have placed the University at the service of the College during the last three years.

At 6 o'clock P.M., the business of the College being completed, the President ordered the names of the governors present to be taken down. Present: Drs. Marsden, Howard, Dufresne, Robillard, Smith, Fenwick, Peltier, Boyer, Russell.

The meeting was then adjourned.

### NAMES OF GENTLEMEN WHO HAVE RECEIVED THEIR LICENSE.

#### GRADUATES OF M'GILL COLLEGE.

Malcolm Roscoe Meigs, Edward Payson Hurd, Henry Clinton Rugg, Hannibal Whitney Wood, John Colborne Anderson, Alfred Beaudet, Prosper Bender, John R. Mackie, John W. Bligh, R. Crammond Blair, Cornelius J. F. R. Phelan, N. Mongenais, T. A. Duford, Gilbert Prout Girdwood.

#### COLLEGE OF SURGEONS OF EDINBURGH.

J. J. Anderson.

#### AFTER SUCCESSFUL EXAMINATION.

F. X. Valode, Réné Darche, Edmond Mount, Fred. Gaboury, Joseph Beaudin, Seraphin Gauthier, J. Henri Roy, Dosithée Martel, Edwin Munro, Cléophas Perrault, Henri D. Labadie, Laurent Gignère, George H. Dufresne, Joseph Paquet, Napoléon Hébert, Alphonse Lenoir, Ephrem Chapeleau, J. B. Forest, T. M. Prime, Hermisdas Leblanc, Léonidas Lavree, Cleophas Roy.

#### LICENSE AS CHEMIST AND DRUGGIST.

Esrom Aram Duclos, Wolfred D. E. Nelson, Thomas S. Bulmer.

#### STUDENTS FOR THE STUDY OF MEDICINE.

Charles Pratt, Julien Guernon, Edward Boissy, Alf. Meunier, L. Proulx, A. Tremblay, Elzéar Plante, Eustache Hurtubise, Emmanuel Lachapelle, Emery Gervais, Wilbrod Ferron, Siméon Aubuchon, Joseph Lanctot, Alfred Larose, Hypolite Moreau, Magloire Archambault, Joseph B. Deguise, Henri G. Hénault, F. X. Trudel, N. Brodeur, H. Neilson, N. Brunette, H. Casgrain, G. Matte, J. Potvin, P. Giroux, J. B. Bélanger.

STUDENT FOR THE STUDY OF PHARMACY.

Charles McDonald.

HECTOR PELTIER, M.D., Edin.,

*Secretary of the College of Physicians and Surgeons for the District of Montreal.*

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COLLEGE OF PHYSICIANS AND SURGEONS OF LOWER CANADA.

The members of the College are especially reminded that the triennial meeting will be held at Three Rivers on the second Wednesday of July next. As business of great moment will be submitted, a full attendance is particularly requested.

At this meeting the election of the Board of Governors for the ensuing three years, will take place.

Those gentlemen who find it impossible to attend should hand their proxies to a friend. Members who have not done so, will have to sign the book of the Registrar, before they will be entitled to vote.

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MORTALITY OF CITIES.

The city of Paris in 1841, had 1 death in 36 of its population. In 1864 the number of deaths was only 1 in 40. Wide streets and open boulevards, with public gardens and squares have done for Paris what they will do for any city that is not insane enough to neglect its duty anent the sanitary condition of its inhabitants. What about our public park?

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## MEDICAL NEWS.

The *Patria* of Naples states that there is at present in the Hospital of Incurables in that city an old woman who is suffering from a strange disease. She every day eats at least five portions of roast meat, seventy eggs, several loaves, and other food, of course including a good quantity of maccaroni. When attempts are made to reduce her diet she raves like a mad woman. Professor Zamoglia has recently undertaken to cure the poor woman, but up to the present time her appetite remains unimpaired.

Dr. Watson has been re-elected President of the Royal College of Physicians, London.—Dr. Richardson, an English chemist, according to the American Druggists' Circular, says iodine, placed in a small box, with a perforated lid, destroys organic poisons in rooms. During an epidemic of small pox in London, he saw it used with great advantage.—M. Decaisne of Antwerp treats itch by simply spreading petroleum all over the body of the patient. He has obtained excellent results, and finds that the emanations from the oil purify the clothes which are put on immediately after the operation.

Dr. Valentine Mott, one of the ablest of American surgeons, died at his residence in New York, on the 26th of April last, at the advanced age of eighty years. It is proposed to erect a bronze statute to his memory in the city of New York.—During 1864 there were vaccinated or revaccinated 69,560 soldiers of the Prussian army. Of these 59,396 had distinct, and 7,265 indistinct marks, and 2,899 no marks at all of previous vaccination. The result of the vaccination was 43,596 regular, 10,505 irregular, pustules, and in 15,459 no pustules at all. Of the latter on revaccination 4,897 succeeded and 10,392 were followed by no result. From this it appears that in 69,560 men the vaccination produced regular pustules in 48,493 or in about seventy per cent.—Dr. Douglas Maclagan has succeeded Dr. Warburton Begbie (who, having completed his allotted time of hospital attendance, was obliged to retire) as professor of clinical medicine in the Royal Infirmary, Edinburgh.—Dr. Warlomont, of Brussels, is forming an establishment for keeping cows to supply vaccine matter.—The Princess of Wales has signified her intention to become Patron to the Hospital for Diseases of Women and Children in Soho Square, London.—There were thirty-nine medical men in the convention which condemned Louis XVI to death. Of these seventeen voted for his imprisonment, and twenty-two for his death.—The Senate of the University of London have decided upon instituting the degree of Bachelor of Surgery.—The University of Pennsylvania conferred the degree of M.D. upon one hundred and seventeen graduates in April last.

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